



Riding the digital wilds: Learner autonomy and informal language learning

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Introduction

In the 20th anniversary issue of this journal, Reinders and White (2016) describe the relationship between computer-assisted language learning (CALL) and autonomy as having become “both more complex and more promising” (p. 143). This is, they assert, in large part due to the rise of informal language learning online, with an accompanying diminution for many learners in the role of formal education. In the process, they claim, education theory and practice have begun to take “the learner’s lives and their experience as a central point for their learning” (p. 143). In this column, I will be arguing that in fact this trend has accelerated, with new opportunities for autonomous language learning through mobile devices and the ever-increasing availability and use of streaming video and other authentic materials in the target language. The choice of learning resources is wide and personal, but inevitably draws the learner into contact—and into learning opportunities—with fellow learners and native speakers.

Given that learner autonomy in language learning entails the use of innate cognitive functions and a social tool—language—its manifestation necessarily combines independence and interdependence. That has been widely recognized in research in recent decades with the move away from understanding autonomy as self-paced individualized learning to viewing it in a social context (Benson, 2001, 2006). The growing emphasis placed on social factors in recent years has led to autonomy being studied from the perspective of ecological theories, emphasizing the multiple and intertwined connections among users, tools, artifacts, and settings, including cultural and educational contexts. Reinders and White (2016) comment the following:

Social technologies for language learning draw our attention back to the value of ecological approaches to understanding learner autonomy. They focus on the multiple environments in which individuals pursue their learning, the role of others and their contributions, and the ways in which learners work with and restructure aspects of their learning environments to establish more optimal learning conditions moment by moment. (p. 149)

The variety of learner options online makes narrative inquiry especially effective in analyzing individual language learning, which is affected by many factors including the learner’s linguistic and educational background; the availability and suitability of chosen or found online resources; the learner’s motivation, knowledge, and ability to use and re-use the resources productively; and the degree to which the experience fits the learner’s self-concept in the present and for the future.

While the principal focus here will be on language learning in the *digital wilds*, we will also consider how that process intersects with formal language instruction and how language teachers can facilitate out-of-school learning. We will be looking first at the learner and then at the learning contexts, but we need to keep in mind that there is no dichotomy but rather a synergy at work in a “fluid interweaving relationship” (Lai, 2017, p. 15) akin to a yin–yang relationship of mutual dependence and interaction.

The Autonomous Learner From an Ecological Perspective

Placing more emphasis in education on the individual learner has been described as enabling a kind of

personal authorship, with the learner being the “author of one’s own world” (Oxford, 2003, p. 89). To my mind, that metaphor, in the context of informal language learning, conveys too high a level of control. A more appropriate, ecological metaphor may be that of the *surfer*. Riding the waves successfully is only partly dependent on the surfer’s athletic ability, experience, and training. It also depends on the weather conditions, with the wind speed and direction, the water temperature, and other environmental factors affecting the size, nature, and frequency of waves. Other factors may come into play, such as the presence or absence of other surfers and observers or the nature of the surfing—casual or competitive. One could imagine numerous other factors, including familiarity with a particular beach and its wave patterns, or the physical conditions of both the surfboard and the surfer. The complex ecological system here mirrors that of the informal language learner in that successful outcomes are not assured and are dependent on both the individual’s background, initiative, and competence, as well as on local conditions. The surfer’s trajectory, like that of the language learner, is susceptible to the kind of initial conditions at hand (of the individual and of the environment), both of which are subject to constant change. Second language (L2) development is a dynamic process, often nonlinear and episodic, making static or linear metaphors of mastery or programmatic progression invalid (Schulze & Smith, 2015). Palfreyman (2014) uses a similar aquatic metaphor in describing the autonomous language learner as not being “simply swept along in the stream of schooling/work/life,” but making “efforts to float, swim, and navigate” (p. 183). The degree of learner agency in the learning process will vary depending on multiple factors, some of which the learner can affect, others not.

One ecological approach that emphasizes and traces change has frequently been used of late as a metaphor for describing the developmental process of learner autonomy—namely complexity theory (CT), also known as complex dynamic systems (Murray & Lamb, 2018; Paiva, 2011; Paiva & Braga, 2008; Reinders & White, 2016; Sade, 2014; Tatzl, 2016; Zhang, 2016). This is in large part out of recognition that learner autonomy is not a simple construct. Rather, it is influenced by a large array of factors, including learner beliefs, motivation, external guidance, the learner’s sense of self (and of a potential future self), metacognitive knowledge, and language learning history. In the recently revised edition of her study on learner self-regulation, Oxford (2017) states that “complexity theory might well help us understand sociocultural identities and imbalances of power, misrecognition of the individual, and different trajectories of various strategy-using L2 learners” (p. 2). She expresses the hope that her book “might start a new, complexity-related movement in strategy assessment, instruction and research” (p. 2).

In fact, CT has been applied to a number of areas related to learner autonomy in online language learning, including intentionality (Kostoulas & Stelma, 2016), learning strategies (Griffiths & İnceçay, 2016), teacher beliefs (Kramsch & Zhang, 2018), distance learning (Braga, 2013), data-driven learning (Boulton, 2002), contextual vocabulary learning (Godwin-Jones, 2018b), language learning advising (Castro, 2018), learner agency (Mercer, 2011b), phonological development (Moyer, 2017), social learning centers (Murray, Fujishima, & Uzuka, 2018), online group dynamics (Poupore, 2018), motivation (Sade, 2011), metacognitive knowledge (Zhang, 2016), online gaming (Scholz & Schulze, 2017), and informal language learning (Godwin-Jones, 2018a; Sockett, 2013). The recognition of how interdependent the interactions of these elements are has led to a “reconceptualization of autonomy as a multifaceted construct that operates on a number of dimensions” (Reinders & White, 2016, p. 144). There has been a growing consensus that autonomy is not a state but rather a “non-linear process, which undergoes periods of instability, variability, and adaptability” (Paiva, 2011, p. 63). The dynamic quality points to the importance of looking at the development of learner autonomy longitudinally, as both internal and external factors over time affect language learning development. That is particularly the case for informal language learning, for which learners typically use a variety of resources whose type, availability, and usefulness are likely to evolve.

Possible learner resources include tools, media, and online communities, all embedded in historical and cultural contexts, shaping the nature of their use and interactions with individuals. This makes cultural historical activity theory (Engeström, 2001) also helpful in analyzing the ecology of online language learning (Blin, 2004; Isbell, 2018). From an activity theory perspective, systems interact and evolve over time, with breakdowns and contradictions as expected and normal phenomena (Blin, 2004). Applying a

broad ecological lens to language learning, developmental spurts and backslidings are not anomalies, as they have traditionally been considered, but are part of a normal, nonlinear development trajectory (Schulze, 2017). These changes in trajectories signal phase shifts in which the introduction of new variables can affect development positively (e.g., gaining access to streaming video in the L2) or negatively (e.g., episodes from a favorite TV series becoming unavailable) and can lead to new system dynamics with unpredictable results. Social action theory (Palfreyman, 2014) and positioning theory (Davies & Harré, 1999; Wu, 2018) are helpful as well in exploring learner autonomy as an interaction between the individual and the social context. Ecological approaches allow for an exploration of how, over time and in stages, L2 development progresses, as the learner interacts with an evolving set of tools, artifacts, and communities.

Motivation and Self-Regulation

Ecological approaches to understanding L2 development emphasize the importance of examining all the dimensions of the process. That begins with the individual learner, whose cognitive abilities, beliefs about language learning, and motivation to learn formed the main focus of attention in early conceptualizations of learner autonomy in language learning (Holec, 1981). Learner characteristics were seen as individually different, but stable, allowing for a predictable development pattern (see discussion in Dörnyei, 2015). This view was consistent with the conceptualization of language as a set of rules to be learned and applied. That static and linear perspective has shifted to a more dynamic and differentiated view of both language and learner (Reinders & White, 2016). The individual self-concept is seen as a “complex, multi-layered, multi-dimensional network of interrelated self-beliefs” (Mercer, 2011a, p. 335). This self-image is differently situated, dependent on context, and may even be self-contradictory at times. While some learner traits are stable, others are in constant evolution as L2 development progresses. Individuals are subject to a variety of influences in their views of themselves and in their beliefs about language learning. These include the pedagogical approach used in school, interactions with peers or family, and aspirational goals. Such influences carry over when learners interact with online tools, services, and communities.

One of the central components for understanding the dynamics of learner autonomy development in online spaces is learner motivation. This is an area within the fields of second language acquisition (SLA) and applied linguistics that has seen significant research in recent years, leading to a new understanding of motivational factors (see Dörnyei, 2015). Studies on motivation have moved away from an effort to develop generalizable models of motivation to instead focus on a framework of individuality and on the dynamic process of motivation or de-motivation tied to evolving and overlapping subject positions (Ushioda, 2011). While learners have a “core sense of self” (Mercer, 2016 p. 4), they adopt in their lives a variety of identity formations. Learners today tend to be “active members of multiple collectives—real, virtual, imagined” (Mercer, 2013, p. 29). Another way to envision that phenomenon is that learning an L2 “involves coping with fractal dimensions of the identity complex system” (Paiva, 2011, p. 66). Fractals are self-similar entities, here different identity constructions replicated within one individual, exhibiting “infinite possibilities of internal subdivisions, limited by an external area, and self-similarity” (Sade, 2011, p. 47; see also Braga, 2013). Fractality helps “to identify patterns at different scales in these nonlinear trajectories” (Schulze, 2017, p. 47). Such conceptualizations help to describe metaphorically the added dimensions of identity created by learning a new language and to further the notion that change, rather than stability, is the normal pattern of second language development (SLD).

Studies of learner motivation are often linked to language learning strategies. Here, too, ecological approaches have shown how dynamic and complex the evolution of individual learning strategies can be (Oxford, 2017). That process depends on context. This is particularly the case for informal language learning, as the choice of materials and methods is nearly unlimited. Resources will be useful or not depending on the learner in question, so that learning strategies “can only be defined relative to a particular agent, because a specific learning activity may be strategic for one and non-strategic for another” (Tseng, Dörnyei, & Schmitt, 2006, p. 81). The effectiveness of a particular resource or strategy will depend on where the learner is in the development process and how that new element interacts with other components

(i.e., level of difficulty, ability to customize through glossing or subtitling, etc.). Increasingly, this is seen as a process of self-regulation, in which successful learners will have the willingness and ability to “reassess, revise, restart, reinvent” (Moyer, 2017, p. 401) when encountering new learning options. The self-regulatory process goes beyond learner strategies, and includes an array of factors including, but not limited to, the following:

goal setting, strategic planning, action plans and action schemata, monitoring and metacognition, action control and volitional control mechanisms, strategic tactics and operations, effective time management, self-motivational beliefs (self-efficacy, outcome expectations, intrinsic interest, and goal orientation, etc.), evaluation and self-reflection, receiving and processing feedback, experiencing pride and satisfaction with one’s efforts, and establishing a congenial environment. (Tseng et al., 2006, p. 81)

Self-regulation involves above all learners being active participants in their own learning (Rose, Briggs, Boggs, Sergio, & Ivanova-Slavianskaia, 2018). Dörnyei (2015) has been especially influential in the concept of learners’ “possible selves,” representing what they might become in the future (Markus & Nurius, 1986). This is a helpful concept in considering learner autonomy, as the learner’s visualization of an L2 future self can contribute substantially to the desire and intent to develop further target language knowledge and skills.

Cultural Contexts

Part and parcel of considering learners as individuals is the cultural context in which SLD takes place. That includes national cultures, institutional cultures (especially schools), and *small cultures* (Holliday, 1999), self-constituting physical or online discourse communities. How languages are taught in school can have an influence that is “subtle and abiding” (Benson, 2016, p. 34), carrying over when learners take on the role of independent learners online. In a recent study looking at Hong Kong adults learning German, Italian, and Korean independently, Chik (2018) discovered that in their online learning practices, the learners “desired to re-create a language classroom learning experience that included structured learning materials” (p. 50). They learned vocabulary by writing words multiple times and created notebooks with parallel columns for the target language and English or Chinese, just as they were required to do in school. Rather than sampling materials such as YouTube videos or user-supplied podcasts, the learners looked for structured materials from what they perceived to be reputable, credentialed sources, such as the BBC or university-affiliated websites. Chik comments, “When learners were given the autonomy to decide their foreign language learning, they seemingly decided to go back to the classroom” (p. 52). That lingering influence of school culture extended to learners’ sense of indulging in “guilty pleasures” when using unstructured materials such as pop culture resources, or even newspapers, as learning spaces (p. 54). In an earlier study, Chik (2014) found that even in online gaming, L2 learners were “transferring learning strategies learned at schools” (p. 96) to game-related online resources. It may well be that in other cultures, school environments do not mark student habits so strongly. In fact, in studies on informal language learning in Europe, no carryover from formal language instruction was reported (Sockett & Toffoli, 2012; Sundqvist & Sylvén, 2016). Indeed, users, or learners of English, enthusiastically embraced pop culture as an avenue toward L2 development that was both entertaining and effective.

The influence of national cultures on the development and exercise of learner autonomy has been a controversial issue. Oxford (2017) termed the debate over culture and learner autonomy a “firestorm” (p. 80). That debate has centered on whether learner autonomy should be seen as universal in its application or as a Western cultural construct that may have less relevance in non-Western cultures. A number of studies have used Hofstede’s (1984) cultural taxonomies, including categories such as individualism versus collectivism, power distance, and uncertainty avoidance to frame behaviors (Lai, 2017; Lai, Wang, Li, & Hu, 2016; Viberg & Grönlund, 2013). Although often couched in cautionary terms, expressing the intention to use the categories applied to individuals only and not to national stereotypes, such studies inevitably type learners as being constrained by national origins. That leads to the advocacy of technology as a means to

neutralize what is perceived as problematic cultural orientations (e.g., Asians as passive learners). The wide use of mobile learning, for example, is seen as showing that “existing local cultures are not insurmountable” (Viberg & Grönlund, 2013, p. 178). While national culture may supply an initial “orientation point” (Palfreyman, 2003, p. 13), today’s learners—especially those learning online—are exposed to too many cultural influences to be able to reduce their identities to national origins, particularly given the growing multilingual and multiethnic makeup of so many countries today. In our real world and virtual lives, we are inevitably drawn into membership in small cultures that develop and dissolve spontaneously. Those groups can have influences—sustaining or temporary—on our values and behaviors and, as such, add a dimension to our identities, potentially affecting SLD. Cultural norms and behaviors are not static and, in fact, in learning a new language, learners “may be modified by their ongoing engagement with target language cultures” in a bidirectional process (Benson, Chik, & Lim, 2003, p. 24).

It is undoubtedly the case that patterns of behavior and institutional cultures can affect learner beliefs and behaviors. That may include institutional obstacles through an emphasis on standardized exams, the presence of a rigid educational bureaucracy, or a heavily centralized educational system. Analyses of learning autonomy in different cultures have looked at how local conditions affected the development and use of autonomy: the transition from rote learning in secondary education in Arabic countries to instruction at the tertiary level oriented toward critical thinking (Dewaele & Al-Saraj, 2015), the use of song lyrics in Sri Lanka due to a lack of technology resources (Fonseka, 2003), cultural traditions in China that impose high expectations on teachers with an accompanying potential for societal censure of teachers' professional practices (Gao, 2018), the impact of family views on language learning in the United Arab Emirates (Palfreyman, 2014), and the preference for socially-oriented, communal activities in Brazil over self-study materials (Silva, 2018). As shown in a recent study on learner autonomy in the Chinese context (Lin & Reinders, 2018), issues of learner autonomy may have less to do with nationality or ethnicity and more to do with local educational objectives and pedagogical methodologies.

According to Holliday (2003), autonomy should not be seen as a single construct, but as taking on different forms in different groups and individuals. This may take the form of “social autonomy,” moving away from the individualistic and sometimes competitive model of autonomy to a mutually supportive dynamic (Kumaravadivelu, 2001). In fact, this is a view increasingly embraced in SLA, that autonomy is universal but diverse (Oxford, 2017) and that collective forms of autonomy actually enhance individual autonomy (Schmenk, 2008). Schmenk (2005) suggests reframing autonomy in consideration of local language learning environments, “glocalizing autonomy” (p. 116), allowing local conditions to determine appropriate variations on the concept and on the role of autonomy in language learning. Smith, Kuchah, and Lamb (2018) suggest that the concept of learner autonomy may “have a particular relevance in the developing world” (p. 11), in that there may be a substantial gulf between school practices and “what many learners want and actually attempt to gain for themselves” (p. 11). Lamb (2004, 2013) found this to be the case for young English learners in Indonesia. In contexts where resources are in short supply or class sizes are large, fostering learner autonomy can be seen as a means to address difficult educational circumstances (Smith et al., 2018). Even in resource-poor areas, many students have access to online resources through their phones. In fact, discussing how mobile devices are being used in support of learning (online or in school) is likely to be a valid and useful discussion topic across cultures. A useful starting point for exploring learner autonomy in any instructional setting is, as Holliday (2003) suggests, to discuss those examples of autonomous learning behavior already in use by students, even if that may be just using online dictionaries.

Narrative Inquiry

The many options L2 learners have online to pursue incidental or dedicated SLD result in endless combinations of variables, making generalizations difficult. Qualitative studies of the learning trajectories of small groups, or even of individual learners, followed over time, can show how the different stages of SLD are affected by the use of specific digital tools or services or by participating in online affinity groups. In the process, characteristic patterns may emerge. Due to the complexity of developmental paths, studies

of individual independent learners do not provide simple cause-and-effect results, but they do “suggest the benefits of developing certain facilitating learning conditions” (Mercer, 2011b, p. 435). Sade (2011) describes a single Brazilian male English learner who, as is the case for many, had little interest in English in school. But upon moving to a new city, he made friends with peers who were fans of English and North American rock music. None of the friends knew English, placing him in the role of the language informant for the group and motivating him to improve his English. He did that principally through working with song lyrics online. Sade (2011) describes the desire to join and contribute to the group as “motivation as belonging” (p. 53).

Another case study of the power of music to motivate SLD is described by Oxford (2017), based on an earlier study (Kao & Oxford, 2014):

Tung-An grew up in the exam-oriented, cram-school culture of Taiwan, where learning English was matter of rote memorization. He hated that approach and refused to be overpowered by cultural and familial expectations. However, he adored hip-hop music, so he created a macro-strategy (he called it his Learning Strategy) of developing English skills through hip-hop. He listened to the songs repeatedly, wrote them down as English language samples, and created his own everexpanding English “textbook” (his chosen terminology for the book) containing lyrics and his lyrics-based lists of vocabulary, grammar points, explanatory notes, and information on culture and pragmatics. He used and added to his textbook everywhere, on public transportation and while walking on the street, and many hours a day over years, thus engineering a personal environment that focused as much as possible on learning English. He was well aware of the street-language of hip-hop lyrics but was so motivated by hip-hop that he also taught himself academic English. (Oxford, 2017, p. 104)

Tung-An’s story demonstrates the power of individual initiative and creativity, forging a unique path to learning. His example shows as well that the relationship between learner and context is bidirectional, with the learner in this case not just using existing resources, but changing, consolidating, remixing.

By collecting and examining language learning histories, taking into consideration variables such as cultural contexts, stages of life, and patterns of change, it may be possible to develop a “typology of language learner narrative identities” (Dörnyei, 2015, p. 204). This could point to patterns of change, helpful in refining SLA theories as well as in improving pedagogical practices. While self-reporting, learner diaries, questionnaires, and interviews have been typically used in qualitative studies, Oxford (2017) recommends additional methods that might provide more detailed information over different time frames, including micro-observations, video recordings, various elicitation methods (think-aloud protocols, for example), and thick description. In evaluating data, a grounded approach can be illuminating (i.e., looking for emergent patterns and building hypotheses arising from the data, instead of using a priori categories of analysis; see Mercer, 2011b; Moyer, 2017). Such a bottom-up, iterative approach is likely to uncover unforeseeable results (Schwienhorst, 2008). Paiva & Braga (2008) suggest that through examining language learning histories, profiles of successful learners can be identified that might include “their willingness for autonomy, their ability to share their achievements with other learners and borrow from them; teachers who are themselves autonomous” (p. 464). Some of those factors are internal, others are external. The latter include teachers providing learners choices, educational systems allowing teacher freedom, and “a fair social, political, and economic system which gives every learner good learning opportunities and every teacher good teaching conditions” (p. 464).

Language learning histories show the variation in trajectories with nonlinear development, and unpredictable results. Small changes or seemingly random occurrences can have major and unexpected outcomes. Chance encounters, new resources, or changes in life status can result in “tipping points” that shift learners’ approaches to SLD (Oxford, 2017, p. 125). That might involve motivational changes or new strategies. Paiva (2011) gives the example of a Japanese housewife, who hated English in school, but who became motivated to learn the language through a seemingly unrelated question from her husband:

One day in those days, my husband once said to me: “I will take you to Hawaii some day.” As I heard from him, I thought that’s it. It was what I wanted to do. The idea of going shopping with fluent English in Hawaii suddenly popped in my mind. But at the same time I thought the English I would take must be practical, not useless. Now I come to think of my choice then, it was too childish, wasn’t it? (p. 67).

As a consequence, she started following English language lessons on the radio. Later, a North American girl enrolled in her daughter’s kindergarten class and the two girls—and their families—became friends, providing both the motivation and opportunity to use English.

Such examples provide evidence that opportunities for SLD only become genuine affordances (van Lier, 2000) when the time and place are right, when they coalesce with real, virtual, or imagined communities—in short when they become part of an “integrative life narrative” (Dörnyei, 2015, p. 12). That concept, combining coherence and vision, is defined by McAdams and Pals (2006) as “internalized and evolving life stories that [reconstructs] the past and [imagines] the future to provide a person’s life with identity (unity, purpose, meaning)” (p. 212). In learning a new language, we add a new chapter to our life story, in the process constructing “new ways of linking the self to new worlds and words” (Ushioda, 2011, p. 202). We forge new identities, develop new relationships, and imagine potential new futures. There are constraints on this process, as not all claimed identities may be available (Sade, 2011). Participation might be restricted due to discrimination related to gender, race, or nationality. Power relations and politics may come into play as well (see Norton, 2001; Toohey & Norton, 2003). In online communities, lack of group acceptance may relate to the failure to follow cultures-of-use or genre conventions (Thorne, 2003).

Writing a personal language learning history can be an illuminating experience, making the learner conscious of the stages in personal SLD as well as creating a general awareness of language and language learning (Benson & Chik, 2010). The self-reflection involved can lead to critical language awareness. The learner gains insight, through personal experience and comparisons with others, into the relationship between language and social contexts. Chik and Breidbach (2014) have shown that having future language teachers share language learning histories across cultures through a telecollaborative project can show participants how individual, collective, and social forces influence SLD. That is a crucial personal learning experience for language teachers.

Tools and Services for Autonomous Learning

Recent studies have shown that SLD occurs autonomously through L2 learners or users finding rich sources of L2 learning in multimedia consumption (e.g., pop music, entertainment videos; Sockett, 2014; Sundqvist & Sylvén, 2016), social media (e.g., social networks, user forums; Warner & Chen, 2017), online affinity groups (e.g., fanfiction or leisure-based communities; Sauro, 2017), and individual language exchanges (e.g., tandem learning, commercial language learning services; Chik & Ho, 2017). These activities may not be initially or primarily related to SLD, but rather to entertainment or socialization (Sockett, 2014). In the process, L2 learners become L2 users. At the same time, this may lead to a consciousness that SLD is occurring through the online activities. That may in turn result in more deliberate attention to language development, occurring along with the primary leisure-oriented motivation. The extent to which SLD occurs is enhanced by language awareness and self-reflection. This kind of largely incidental learning is in line with evolving views of language and language acquisition in applied linguistics. What is sometimes labeled “self-directed naturalistic learning” (Benson & Chik, 2010, p. 74) calls into question the traditional approach to SLD, based on sequential curricula, learning grammar rules, and developing discrete skills. Instead, it aligns with a usage-based model of language, in which patterns and *chunks* (i.e., multi-word units of lexis and grammar) are seen as a basis for language acquisition (Ellis, 2017).

For that to be possible, learners need “exposure to language in rich contexts” (Sockett, 2013, p. 55), including how language is used idiomatically and how it varies according to changing contexts such as registers or speech acts. In fact, repeated listening to songs, watching multiple episodes of a TV series, or

engaging in repetitive gaming scenarios can aid the acquisition of patterns through “high frequency, high context exposure to salient examples” (Sockett & Toffoli, 2012, p. 148). In the process of repeated listening and viewing, the learner undergoes a series of cognitive processes, including “forming categories, detecting patterns, and noticing novelty, as well as imitation” (Sockett, 2013, p. 51). This process is likely not effective for all users, with studies showing that it may be most appropriate at intermediate and or higher levels (Lai, Hu, & Lyu, 2018; Moyer, 2017; Trinder, 2016). The availability of appropriate resources may be limited as well. Many of the studies of naturalistic language learning deal with English, for which popular media is readily available. In Chik’s (2018) study of Hong Kong learners of other languages, the availability of media varied considerably with language. A learner of Korean easily found pop-culture materials, which in fact were the starting point for the learner’s exploration of the language. In contrast, a learner of German found he could not use the same strategies and resources he had used for learning English, as he had “limited access to, and thus knowledge of, German popular culture in mainstream media” (p. 48).

It is also the case that not all online communities of practice involving L2 use will provide a sufficient volume of L2 to facilitate language acquisition. In a recent study on a Korean language-oriented Reddit forum, Isbell (2018) reported little target language use and “a great deal of learning about language” (p. 82). Of course, as Isbell comments, such discussions can be helpful to learners, depending on their proficiency level and learning context (i.e., good for lower-level learners or those in formal instruction seeking clarification on specific language issues). While Isbell’s study focuses on an online community specifically oriented to language learning, other studies have shown that general interest social media, such as Facebook, may frequently be used in a similar fashion. This, too, may be a residue of school culture. Lai et al. (2018) found that learners surveyed in Hong Kong used social media to solve problems with homework or to elicit error corrections, connecting more often and more comfortably with their classmates than with native speakers: “Thus, these social-oriented technological experiences were reinterpreted, by the participants for various reasons, into contrived learning experiences” (p. 123).

In fact, using social media for communicating with strangers was characterized by learners as “limited and inauthentic, and hence boring” (Lai et al., 2018, p. 123). Some also expressed the concern that social networks were “full of inaccurate language use” (p. 124) and that their use by learners violated the conventions of use. Lai et al. provide this example:

Once I chatted with a Spanish speaker in an online chatting program. We greeted each other and then we asked about how the day went, what we had for lunch, and what we ate and did yesterday. Then just after a while, I felt, and I think he felt too, bored (p. 123).

Trinder (2016) found similar results, further examples that the same technology can result in quite different learning experiences. They also indicate that leveraging students’ personal interests—through, for example, popular entertainment media—is likely to engage learners much more initially than looking to approaches which overtly emphasize language learning. It is also the case that for certain L2-related learning activities, there may be some degree of knowledge and autonomy necessary as preconditions for success. Benson (2001) gives the example of using concordances independently, requiring some knowledge of the process and its rationale.

Lai et al. (2018) reported that the learners in her study had little trouble locating and using tools and services for out-of-class language learning. That is echoed by Chik (2018). Other recent studies emphasize the extent to which “all participants tried to capitalize on the advantages of mobile-assisted language learning” (Chik, 2018, p. 52). Lamb (2013) found that in a relatively remote rural area of Indonesia, young learners were listening to English songs and watching English TV. They were especially enthusiastic about using their phones for social connections in which they communicated in both English and Indonesian. The widespread use of mobile devices, especially smartphones, is one of the principal enablers of the growth in online informal language learning (Godwin-Jones, 2017b). Streaming services such as Netflix are available for mobile devices, as are virtually all online services today, usually through dedicated apps. Smartphones allow for extensive customization, leading to highly personal configurations of apps, content, and settings. Since these devices have become ubiquitous companions, they are always available and support anytime,

anyplace learning. Chik (2018) describes the learners in her study as “immersed in their portable learning spaces” (p. 52). That immersion, aided by earbuds and today’s vivid and large smartphone screens, can result in *flow* experiences, intense focus and involvement in activities to the extent that the user loses track of time and place (see Dörnyei, 2015). That is one of the wonders of the smartphone: the power to provide a full immersive experience (while sitting comfortably at home) or a 5-minute vocab learning session (while waiting in line at Starbucks), as well as many experiences in between, representing a range of time, energy, and attention commitments. Smartphones serve to bridge the divide between local and global and between leisure and work or study. They provide situated learning that can connect real-life settings and experiences with worldwide communities online. These contextualized learning experiences contribute to an ecological model of learning that encompasses the learner, the learner’s network of friends and family, educational or professional contexts, and global communities. Mobile devices provide the high degree of access on demand and freedom of choice often associated with learner autonomy (see Murray, 2014).

The Teacher’s Role

For L2 learners to become L2 users with the skills and motivation to develop a lifelong connection to the language, there need to be personal connections in place. Those could happen in any variety of ways, but they are facilitated today by the rich resources available online. They might involve interactions with specific target language communities with shared interests, passions, or professional or personal aspirations. Learners may well find such opportunities for online engagement with the L2 on their own, but that process can be assisted in different ways: through peer recommendations (e.g., via social media), through language advising or self-access centers, or through formal instruction. Teachers can play a pivotal role in encouraging each student to leverage his or her “transportable identities (e.g., as football fan, amateur photographer, and film buff)” (Ushioda, 2011, p. 204) into language learning opportunities outside the classroom:

We need to engage their own identities and interests in our lessons and promote a sense of continuity between what they learn and do in the classroom, and who they are and what they are interested in doing in their lives outside the classroom, now and in the future. (Ushioda, 2011, p. 204)

Studies have shown that simple encouragement to students may not suffice (Lai, 2015); specific guidance on resources and on their use can have a significant impact on student actions, as can demonstrating the use of tools and services in class (Lai, 2015; Rosell-Aguilar, 2017). Additionally, students can be assigned or invited to report on online learning resources. Having students themselves help in the selection of learning materials can enhance motivation and contribute to metacognitive knowledge (Benson, 2016; Lai, 2017). Part of that review process should include opportunities to reflect on tools, services, and strategies through learner diaries or online journals (Chik & Breidbach, 2014).

The in-class discussions and hands-on experiences ideally should include the mobile devices that form such an important part of our students’ lives (Godwin-Jones, 2018d). Many school systems and individual instructors, however, ban phone use in class, cutting off a key tool for information retrieval and communication:

This makes the classroom into an even more unreal environment, where language learning is an artificial enterprise, serving as potential practice for the real world, but not actually part of that world. Banning phones from the language classroom discourages the notion that language acquisition is something students can integrate directly into their lives, with the smartphone helping to bridge the gap between school and life. (Godwin-Jones, 2017b, p. 10)

Indeed, studies have shown that use of phones for learning in the classroom can lead to more use of phone-mediated learning outside school (Byrne & Diem, 2014; Leis, Tohei, & Cooke, 2015).

Deeper insight into language and language learning can come from having students jointly create learning

materials, such as the modules described by Schwienhorst (2008) in which students selected authentic texts, created exercises collaboratively, and then shared them with peers. Godwin-Jones (2018c) describes a similar process of online materials curation and joint faculty–student module development. Student-created materials may be even more expansive, as in the case of global simulations in which learners take on authentic cultural roles (e.g., residents of an apartment complex or workers at particular jobs) and create interactions in the target language (Michelson & Petit, 2017). Kronenberg (2018) describes how such a *gamified imagined community simulation* (students creating the virtual German city of Pfefferhausen) was integrated into his department’s German language curriculum.

An open, collaborative, and decentralized class environment contributes to the development of learner autonomy (Murray & Lamb, 2018). For many teachers, it is likely to be a challenge “to surrender control of carefully designed tasks and curricula” (Warner & Richardson, 2017, p. 220). Teachers may embrace learner autonomy in theory, but they may face difficulties putting it into practice (Benson, 2016). Encouraging students to become autonomous learners not only results in a loss of control for the teacher, but it also means enabling “divergent student outcomes,” as students follow different trajectories based on interest and ability (Benson, 2016, p. 39). That involves providing a wider selection of choices than is typically the case in instructed language learning. Silva (2018) comments the following:

In order to expand students’ possibilities of becoming autonomous, language learning contexts should offer different sorts of experiences. Furthermore, these opportunities need to cater for different students’ identities by providing them with a wide variety of activities, from which they will choose the ones that they feel attracted to and that will give them a sense of language as it is used in the real world. (p. 221)

Godwin-Jones (2017a) describes providing intermediate-level students with a broad selection of subject matters, modes, genres from which to choose to fulfill course requirements. Michelson and Petit (2017) describe a similar set-up in which students have the choice of selecting activities recommended by the teacher or of discovering their own to use. This aligns with calls for encouraging broader student digital literacy (Warner & Dupuy, 2018), but it may be difficult to implement in formal instruction, especially if instruction is centered around the use of a traditional print textbook. Given the diversity and ever-changing nature of online learning resources, Sockett and Toffoli (2012) suggest that training students in the development of communication and media skills in general would be more beneficial than guidance on specific tools or strategies. Certainly, developing capabilities for critical evaluation of resources is a valuable ability for all students and teachers.

Teachers trying to incorporate online resources and skills in their classes may well run up against official curricula and the dictates of locally or nationally accepted educational methodologies. Teacher autonomy can be a necessary condition for the development of learner autonomy (Lamb & Reinders, 2008; Tatzl, 2016). A central aspect of teacher autonomy is the ability to employ approaches the teacher selects, including the use of technology. Choice may be limited by school policies, lack of digital literacy, or simply a workload that allows scant opportunities for exploration or professional development. Having teachers work together—especially in resource-strapped contexts—offers a possible avenue for both professional development through peer networking and for resource exchange (see Smith and Kuchah, 2016). Being informed consumers of technology can help teachers in guiding students in out-of-class learning. Having insight into software development and the basics of coding is even more helpful, as more knowledge in those areas can provide a better basis for making wise technology choices (Godwin-Jones, 2015). For many language teachers, the technology options supplied by a school or university may be limited. Instructors are often strongly encouraged to use only the officially supported and supplied software. In many cases, that is likely to be a learning management system (LMS, also known as a virtual learning environment).

Some argue that the use of a LMS can be helpful in guiding students toward learner autonomy. Reitbauer and Fromm (2016) assert that such a closed learning system “allows for a greater means of control and therefore is likely to result in a more efficient learning process” (p. 235). In this view, encouraging affinity-based learning “comes at a cost: the loss of control on the part of the teacher and the questionable efficiency

of a self-governed but largely unguided learning process” (Reitbauer & Fromm, 2016, p. 237). Others have argued for the convenience of a LMS and against introducing a variety of e-tools out of practical concerns “as a multitude of passwords would be required” (Orsini-Jones, 2010, p. 203). Using a LMS does not mean that other tools and services cannot be added, particularly as now most learning systems enable the integration of third-party tools. Lee (2016) used a LMS (Blackboard) and the digital workbook MySpanishLab, but she also introduced a variety of other tools, including Blogger, AudioBoo, and a wiki. If part of our task as language teachers is to prepare students for engaging in the world beyond school, introducing students to a variety of digital tools would seem beneficial. Skills in using a LMS hardly carry over to the real world (Godwin-Jones, 2012).

Conclusion. Resisting Reductionism

Language learning is complex, embracing as it does “the cognitive context (e.g., working memory or intentionality...), the social context (e.g., educational system, relationships with other learners and the teacher), the physical environment, the pedagogical context (e.g., the task, materials, and ways of teaching and learning), and the sociopolitical environment” (Zhang, 2016, p. 151). That complexity and contextual embeddedness is characteristic as well of what constitutes ideal conditions for autonomous language learning (Paiva & Braga, 2008). In analyzing SLD, this complexity is often reduced, so as to study individual components of the system (Blin, 2004)—as is also the case in CALL (Schulze, 2017). With something as complex as learner autonomy, simplification decontextualizes and misrepresents the dynamic process at work:

The impromptu nature of informal learning is also an indication that it is emergent in nature, taking place in a complex dynamic system in which interactions between the many components in the system lead to the emergence of collective outcomes which might not have been easy to predict from an analysis of the individual components. . . . These outcomes depend as much on the character of the interactions between components as they do on the character of the components themselves. (Sockett & Toffoli, 2012, p. 140)

Studying variables in isolation can be informative but may convey a cause-and-effect impression that belies the interdependence of individual traits, social interactions, institutional forces, socio-economic factors, and political or power relations.

CT favors a retrodictive approach that works backward from outcomes (positive or negative) to analyze the factors that interact to guide the learner’s language trajectory. That retrospective process may point to aspects of the initial conditions of the learner that are meaningful or to significant encounters with particular online tools, services, or interest communities. Phase shifts in the trajectory—where learners move to a different space in their learning trajectories—can be revelatory. Discovering such dynamic turns is only possible if enough detail is collected about the interactions over an extended period, allowing changes to be seen in context, not in isolation. According to Schulze and Smith (2015), the main goal of an analysis of learner–computer interactions ought to be “detecting, localizing, describing, explaining, and interpreting change” (p. iii). In fact, ecological approaches eschew prediction in favor of explanation or description. In that way, they help us move beyond binary opposites, looking for reciprocal relationships, not cause and effect (Murray & Lamb, 2018).

Applying ecological approaches to learner autonomy encourages us to see the learner or user in the full interdependence of individual and social context. In the case of learner autonomy, those connections have led to some quite divergent views on its meaning in social, economic, and political contexts. Some scholars have emphasized the relationship of autonomy to the global educational climate today, with its emphasis on independent skills development, lifelong learning potential, and adaptability (Benson, 2016). Warner and Richardson (2017) point out that the revised ACTFL *World-readiness standards for learning languages* (American Council on the Teaching of Foreign Languages, 2015) redefine the *community standards* to emphasize the role of language in a “global society” of “global economies and consumers” (cited in Warner

& Richardson, 2017, p. 203). This positions the learner as “a consumer who partakes in a new linguistic economy rather than as a participant in social activity” (Warner & Richardson, 2017, p. 203). Schmenk (2008) has shown that some aspects of the description of autonomy fit characteristics associated with successful business managers.

Rather than viewing learner autonomy in the context of consumerism or business practices, another perspective emphasizes individual agency, through encouraging critical reflection, creativity, and personal initiative. Schmenk (2008) points to the discussion on education in Germany in the 1960s and 1970s when learner autonomy was seen in the context of social and political emancipation. In this view, language learning is a liberating process. Kumaravadivelu (2001) echoes this perspective in evoking “liberatory autonomy” (p. 547), empowering learners to become critical thinkers (see discussions in Mercer, 2013 and Schmenk, 2008). Liberatory autonomy seeks “to help learners recognize sociopolitical impediments that prevent them from realizing their full human potential, and ... providing them with the intellectual and cognitive tools necessary to overcome them” (Kumaravadivelu, 2001, p. 547). This aligns with the idea of collaborative, democratic, and decentralized learning, which is instrumental in the development of learner autonomy. It also supports the call in recent SLA theory to look at empowering the individual learner (Larsen-Freeman, 2018) and developing critical literacy pedagogies that encourage learners to address real world issues (Warner & Dupuy, 2018). Sade (2011) suggests that a recognition of the unpredictability and nonlinearity in language learning

can inspire social actions that favor those learners who, many times, are victims of the school system and are excluded from it due to linear and prejudiced views. The perspective of complexity theory helps reveal the complex nature of human beings and why, due to this nature, it is impossible to fit them in pre-fabricated, homogenous and essentialist models, be they theoretical or methodological. (p. 54)

Viewing and treating learners as unique individuals and full-fledged human beings, rather than as learners, “defined by, limited and therefore reduced to measurable skills” (Holliday, 2003, p. 115) can both empower learners to see language learning as integral to real-world experiences and also help instructors to see the bigger picture of contributing to fighting stereotypes, encouraging empathy, and working toward social justice.

Riding the digital wilds successfully involves learner choices and actions, along with the further development of internal attributes of initiative, persistence, and creativity. Also needed is the recognition that human development is tied to group participation and respect for the autonomous choices of others (Schmenk, 2008). The idea of individual autonomy can be traced back to the enlightenment and Kant’s conception of the modern sovereign subject (Schmenk, 2008). However, for Kant, free will can only be exercised by socially-integrated individuals (Lewis, 2014). Lewis (2014) applies this vision to learner autonomy in language learning, seeing autonomy as linked to behaviors associated with human sociality: “that is, identifying with other learners, helping them, responding to help received, practicing fairness, and collaborating as and when appropriate” (p. 57). Through social participation, individual autonomy is enhanced, language skills are developed, and personal identity is expanded.

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