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*Review*

# A Dual-Motivation System in L2 and L3 Learning: A Theoretical Framework and Pedagogical Application

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**Abstract:** This article is an attempt to conceptualise the possibility of two coexisting language learning motivational subsystems for an existing L2 (or L2s) and an L3 currently being learnt, which gives rise to a complex dynamic dual-motivational system. As is generally accepted, an L2 in second language acquisition is defined as any language learned in addition to a person's first language, which can be the second, third or any other subsequent language. Partly because of this, there appeared to be an assumption that L2 motivation, in general, could be applied to all these "L2s". In more recent studies, however, it was pointed out that L3 learning may sometimes have an adverse influence on one's lexical activation, L2 identity, or general L2 motivation. In particular, L2 and L3 motivations have been conceptualised as two quite distinct yet related systems. Against this backdrop, this article argues that L2 and L3 (with any subsequent languages) deserve discrete statuses, as do the motivations of learning them. It then follows that there exists a dual-motivation system for multilinguals. From a Complexity Dynamic Systems Theory perspective, this paper presents an up-to-date review of the mutual influences between languages among multilingual learners, discusses the similarities and differences between L2 and L3 motivational systems, and, most interestingly, explores the interaction between the two types of additional language learning motivation among multilinguals. This article ends with a close look into how the notion of a dual-motivation system could shed light on L2 and L3 pedagogies. It suggests how teachers could maintain existing learning motivation when another language is introduced to one's linguistic repertoire and avoid detrimental effects that might thus be caused.

**Keywords:** L2 motivation; L3 motivation; dual-motivation system; L2 self; L3 self; Complexity Dynamic Systems Theory; multilingual learning

## 1. Introduction

The ability to speak more than one language seems, to many, a distinctive advantage. Contrary to this lay view assuming that most people usually speak only their mother tongue, being multilingual or "potentially multilingual by nature" turns out to be the "normal state of linguistic competence" (Hammarberg 2009, p. 2). This paper discusses the phenomena of second (L2) and third language (L3) learning, as well as the motivational dynamics underlying L2 and L3 acquisition, as complex dynamic systems against the background of multilingual education. A conceptual framework for a dual-motivation system is proposed to capture the nature of L2–L3 motivational forces that could be applied in the learning of additional languages.

### 1.1. Multilingualism: Brief Background Information

Though the definition of multilingualism is debatable as the notion of competence may vary among multilingual speakers, it has been commonly understood as the use of more than one language by a person or by a community of speakers (McArthur 1998). More recently, there appears to be a trend to distinguish between multilingualism and plurilingualism, especially among European researchers. Beacco and Byram (2002), for example, term individual multilingualism as plurilingualism, while leaving the word

"multilingualism" for the collective sense at the community level. Jessner (2008), in a similar vein, uses the term multilingualism to denote the study of the societal dimensions of the acquisition of several languages. She calls the study of individuals' repertoires and agency of multiple languages plurilingualism. While this point is well taken, this article will still adhere to the conventional definition of multilingualism because multilingualism as a generic term, at both individual and communal levels, has been more widely accepted in the field. Following this traditional term may render the discussion more easily accessible to the readers.

Robert Lado's (1957) book *Linguistics Across Cultures* marked the beginning of studies into crosslinguistic influence (CLI), which, according to Jessner (2006) as well as De Angelis and Dewaele (2011), lies at the heart of multilingual research. In this book, Lado provides a systematic theoretical explanation of the idea that "those elements which are similar to the native language will be simple for him, and those elements that are different will be difficult" (p. 2). This is the so-called Contrastive Analysis approach to second language acquisition which was popular from the 1950s to the 1970s. It then spawned a widespread movement in L2 and foreign language teaching to structurally compare languages and sufficiently describe their similarities and differences. L1 interference and L1 transfer became the foci of research on CLI (Sharwood Smith and Kellerman 1986) during that time. These theories formed the basis for predicting learner difficulties with target languages and have strong influences on the curricula of many ESL/EFL classrooms around the world.

However, the Contrastive Analysis approach to CLI and language teaching also meets with various criticisms. One of the main issues is that, theoretically, it focuses too much on one type of error, namely L1 transfer, and neglects other error sources that are equally or even more important. Contrastive Analysis attributes learning difficulties to typological or psychotypological differences between one's L1 and the target language, which oversimplifies the complexity of L2 acquisition. In practice, Contrastive Analysis fails to correctly predict many errors that occur. Some "foreseen" errors do not happen, while other unpredicted errors do. For example, it was predicted that it would be easier for French speakers to acquire the inflectional morphology in English than Chinese speakers, as French involves morphological variations, while Chinese does not. However, empirical studies did not support this surmise; Chinese and French learners of English as an L2 exhibited quite similar error patterns (Lightbown and Spada 2013). Therefore, this theory does not seem to support empirical verification either. Contrastive Analysis thus has gradually lost popularity in the field. The problems with Contrastive Analysis have led researchers to reconsider the complex processes involved in multilingual acquisition. Several models of multilingual acquisition have been proposed, such as De Bot's (1992) bilingual model, Grosjean's (2001) language mode hypothesis, Clyne's (2003) plurilingual processing model, and Herdina and Jessner's (2002) dynamic model of multilingualism.

Among many of these models of multilingualism, CLI continues to dominate epistemological efforts in the field (Jessner 2006). Crosslinguistic awareness involves both tacit and explicit awareness of the mutual influence and interactions between different languages during the process of learning an L2. Initially, CLI research began with the examination of the role of one's L1 on L2 learning, which lead to the aforementioned notion of L1 transfer. Kohn (1986), for example, believes that "despite its sometimes irritatingly elusive character, transfer is one of the major factors shaping the learner's interlanguage competence and performance" (p. 21). Such an understanding of CLI has been criticised as too narrowly conceived. It is then necessary to not only focus on the influence of one's existing languages on a new language currently being learnt but to take all language knowledge into consideration, which inevitably involves the influence of a new language on existing ones.

### 1.2. Defining L1, L2, and L3 in Multilingualism

Bloomfield (1935) offers a classic definition of an L1 as a language one is exposed to from birth, which is commonly referred to as one's native language or mother tongue.

A person can have more than one L1 if they grow up in a multilingual environment. Lenneberg's (1967) seminal work, *The Biological Foundations of Language*, proposed the notion of a critical period for language learning. He argued that native(-like) language proficiency is more likely to acquire within the critical period, usually before puberty; in contrast, a language learned after that window period is unlikely to reach the L1 level, usually with a noticeable accent. However, the L2 or native(-like) proficiency view from a critical period hypothesis perspective has been challenged by more recent studies (Birdsong 1999; Bialystok and Kroll 2018; Singleton and Muñoz 2011). The notion of an L2 is even more elusive. We are fully aware of the sociolinguistic significance of differentiating between an L2 and an FL (Foreign Language), but it is not our concern here. Conventionally, an L2 is an umbrella term to cover any language learned in addition to one's native language (Gass and Selinker 2008). In this sense, an L2 refers to any non-native language learned or currently being learned, which could be one's L3, L4, and so on.

Hammarberg (2014, p. 5) proposed two criteria for differentiating an L1 and an L2. The first one concerns the chronological order of acquisition. An L1 develops as the original system, and an L2 is subsequently added to the established L1. This definition is based on the priority/posteriority distinction. The second criterion, however, relies on cognitive maturity. That is, an L1 is a language encountered and acquired up to a certain level during infancy when linguistic categories, patterns, and rules of use are first shaped. An L2, in contrast, is a language encountered after the L1 reaches a certain development. This is not a pure chronological division; instead, it distinguishes between a native and a non-native language. The second criterion seems to apply better to situations where one has acquired multiple languages during very early childhood that merit the status of L1s and those as L2, based on the cognitive maturity that comes with age.

As has been discussed so far, the conventional definition rests on a two-level distinction between L1(s) and L2(s). The current scholarly debate (e.g., Hammarberg 2010; Henry 2011a, 2011b, 2012) on multilingualism, however, tends to reject such a dichotomy and tries to view a newly learnt L3 as a distinctive linguistic system from existing L2(s). In view of all this, Hammarberg (2010) defines L3 as "a non-native language which is currently being used or acquired in a situation where the person already has the knowledge of one or more L2s in addition to one or more L1s" (p. 97).

### 1.3. Complex Dynamic Systems Theory (CDST) in Brief

Any multilingual person, by definition, must have learnt and may currently be in the process of learning more than one language. As discussed in Section 1.1 above, the relationships between and among these languages are of central importance to multilingualism. In recent years, the Complex Dynamic Systems Theory (CDST, Larsen-Freeman 1997, 2013) has emerged as a metatheory for a nuanced understanding of dynamic and complex systems, such as language learning motivation and even second language acquisition, in general. Though not denying the necessity of object theories of language, a metatheory like CDST enables the conceptualisation of language-related theories from a systemic, rather than piecemeal, perspective.

A complex system in CDST consists of a large number of agents (namely, active elements) that are constantly making changes to themselves and their behaviours due to the interactions with the rest of the system (Larsen-Freeman 2011). An agent can and will influence and be influenced by many other agents in the system, which in turn interacts with other systems. An important feature of a complex system is that linear causality is not often observed, as the change behaviours of comprising elements are not proportional to their causes (Paiva 2011). Such open systems have sensitive dependence on their initial conditions, where small inputs can trigger very significant consequences.

CDST has been applied to language and its learning by many (e.g., De Bot et al. 2007; Larsen-Freeman 1997, 2011, 2013). From this perspective, language development consists of completely interconnected systems that depend sensitively on initial states. At the same time, the emergence of an ever-changing state (the so-called attractor state), from an initial

state due to interactions both within and outside of the system, captures the language learning process within and among individuals (De Bot et al. 2007).

### 1.4. L2 and L3 Learning as Complex Systems

The field of second language acquisition (SLA) has proved to be a fertile land of research. In contrast, third language acquisition (TLA) appears to be a relatively new inquiry and is seen as more complex than the acquisition of an L2 because both the product and the process of L2 learning can potentially influence the acquisition of an L3 (Dörnyei 2007; Henry 2012). As discussed, the two-level distinction between L1(s) and L2(s) in one's multilingual repertoire is too simplistic (see Section 1.2 above), since an L3 emerges as a different subsystem from the previous L2s. This can be further explained from a CDST perspective.

Within a CDST framework, Kramsch (2011) opined that language learning is neither cumulative nor additive: when one piece is added, the rest changes, and the whole system needs to be re-signified and restructured. Therefore, an L3 as a new agent joining the linguistic repertoire of a multilingual is bound to influence the current language systems and to be influenced by these existing systems, too. L3 learning, as argued in Hufeisen (2005), is different from L2 learning because of prior L2 knowledge and L2-specific learning experiences. This suggests a specific role for a prior non-native language (NNL) in the linguistic background of multilinguals. Contrary to an earlier common belief, it has been attested in recent third language acquisition research that not only one's mother tongue(s) but also all prior NNLs may become activated in further NNL acquisition (Hammarberg 2014). Such influences may be more salient between current L2(s) and this newly added L3, rather than between L1(s) and the L3. Along the same line, Paradis (2004) differentiated between two neurolinguistic mechanisms for L1 and L2 and argued that all NNLs shared an affinity within the L2 mechanism that is separate from the L1 system. This is attributed to the learner's perception that L1 is "alien to the target language and hence inappropriate to make use of, which gives rise to a tendency rather to draw on another non-native language" (Hammarberg 2014, p. 9). Similarly, De Angelis (2005) proposed an "association of foreignness" for such a leaner perception. It appears that the newly arriving L3 does lead to some degree of restructuring in the current linguistic system of a learner, and such an impact is more obvious for the current L2 system.

Such mutual influences between L2(s) and L3 are not limited to the linguistic level. Recent research on learner motivations in L2 and L3 among multilinguals also points to such complex relationships (e.g., Bui and Teng 2021; Man et al. 2018). Next, we shall turn to reviewing how L3 learning motivation could be differentiated from its L2 counterparts and how motivational dynamics between L2 and L3 learning manifest themselves in reorganising learner motivational self-systems.

## 2. From L2 to L3 Motivation

### 2.1. L2 Motivation and the Emerging Concept of L3 Motivation

Ever since Gardner and Lambert's (1959; Gardner 1985) socio-educational model of L2 motivation from the Canadian bilingual context, the concepts of integrativeness and instrumentality have had a great influence on later models of motivation for learning additional languages (Skehan 1989). However, the validity and usefulness of these constructs against the backdrop of globalisation have been challenged as the notion of native speakers and their communities becomes widely questioned (Jenkins 1998 and elsewhere). In this connection, various alternative concepts emerged, such as world-citizen identity (Lamb 2004) and international posture (Yashima 2002). More relevant to multilingual education, Dörnyei's (2005) process model, which involves pre-actional, actional, and post-actional stages of motivation, further captures the dynamic nature of motivational ebbs and flows during learning, along with his known proposal of L2 self-system.

As argued in Section 1.2 above, L3 has now been viewed as a distinct construct from L2 by many, which gives rise to an emerging question of whether L3 motivation merits a

separate status from existing L2 motivation. Recent research on L3 motivation discovered that one's L3 motivational drive differs from its L2 counterparts. For example, some studies (e.g., Bui and Teng 2021; Henry 2011a, 2012; Man et al. 2018) found that an emerging L3 learning motivation potentially exerts negative influences on the existing L2 motivation. In contrast, others (e.g., Bonnet et al. 2018; Busse 2017; Busse et al. 2020) suggest that a positive experience with learning an L2 may trigger a positive self-concept of oneself as an L3 learner/a multilingual user and the other way round. It is, therefore, reasonable to reframe existing notions of L2 motivation and consider L3 motivation as a different construct. Although L3 learning is a rather common phenomenon, and the particular motivational challenges involved in this have been recognised, there has been a paucity of L3 motivation research until recently (Henry 2014). Henry, however, also pointed out that studies with a focus on L3 motivation began to appear, such as Csizér and Dörnyei (2005), Csizér and Lukács (2010), and Henry (2010, 2011a).

Similar to L2 motivation, L3 motivation denotes the "inner drive, impulse, emotion, or desire" (Brown 1987, p. 114) that moves one to learn an L3, which will influence one's goals to achieve, issues to avoid, and the degree of efforts they will pay in the L3 learning process. However, L3 motivation differentiates itself from L2 motivation, as it is likely influenced by several factors. First of all, L2 learning could happen due to many factors such as immigration, immersion, border region residence and even political changes, but in the educational context, L3 learning is often a personal choice of interest, while an L2 is usually a compulsory school subject. There is quite likely a qualitative difference between motivations for these two types of languages. Secondly, L3 learning per se entails previous L2 learning experiences, which may impact this L3 in a different way from an L1's influence on an L2. As mentioned in Section 1.4 above, "association of foreignness" (De Angelis 2005) is likely to occur between L2(s) and an L3, which is not shared between L1 and other NNLs. Thirdly, L3 motivation, though probably highly intrinsic, may suffer from a lack of pragmatic needs externally and may experience a high risk of sustainability. It may come with great desire along with genuine interest for a particular L3, but such an effort may have to give way to L2 learning when high-stakes events take place, such as college entrance exams, where an L2 is a required subject. L3 learning motivation might have to be suspended at critical junctures, and it may or may not resume afterwards.

### 2.2. Mutual Influence between L2 and L3 Motivation as Complex Systems

Navarro and Arrieta (2010) argued that behaviours, like affect and motivation among human beings, "show non-linearity and chaos" (p. 247). They found that when work motivation was analysed longitudinally and dynamically, the findings showed marked differences from those in cross-sectional design studies based on synchronic measures. In a similar vein, language learning motivation is never a static construct but rather a dynamic process that undergoes complex chaotic development. When one learns an L3, this new language not only adds itself to the existing first and second languages but is also likely to reconfigure the whole linguistic repertoire. What follows is that third language learning brings in new motivation that breaks the motivational equilibrium reached after one learns an L2. L3 motivation is a new agent, in CDST terms, that will have an impact on other extant agents in the system. The most prominent "other" element within one's motivational system would be one's L2 motivation, which is unlikely to remain undisturbed but rather becomes susceptible to the introduction of a new L3 motivational drive. Then, the initial state of the L2 motivational system must be turned into an attractor state to a new (but temporary) balance after the introduction of L3 motivation. There is a large degree of randomness at work, and the extent to which the initial state of the current L2 motivation is altered is not proportional to the strength of L3 motivation.

The complexity of L3 motivational influence on L2 motivation is shown in the non-linear relationship between them. The emergence of L3 motivation will unavoidably activate the existing L2 motivation given the affinity between NNLs (Hufeisen 2005). However, such activation quite often appears to trigger competition between these two

motivational systems. On the one hand, L2 motivation could exert a negative impact on its L3 counterpart. Henry (2011b) discovered that self-awareness as an L2 English speaker would seem to be immediately activated and, once active, to become cognitively dominant when learners interact with imaginary L3 interlocutors. This L2 self-conception interferes with L3 learning. It is also found in his study that both the relative strengths of the two systems and one's motivational disposition will determine the new state of their motivation. On the other hand, the rise of L3 motivation may undermine the current L2 motivation. Man et al. (2018), for instance, have shown how L3 Japanese was thought of as much more interesting and culturally relevant to a group of Hong Kong learners than L2 English. These students further recalled learning experiences of L2 English as a school subject that required dull drilling and boring homework, as compared with their self-selected L3 Japanese, which was fun and relaxing. In agreement with Henry (2011b), these Hong Kong students have tried to construct their ideal L3 selves through positive self-knowledge and L3 learning experience.

## 3. Existence of a Dual-Motivation System among Multilinguals

### 3.1. The Need for a New Conceptual Framework of Multilingual Motivation

A preliminary conclusion one could draw from the previous discussion is that L3 learning differs substantially from L2 learning, and therefore, L3 motivation should be considered a distinct construct itself rather than seen as part of an existing L2 motivation. However, as the philosopher Paul Cilliers put it, the notions of 'inside' a system and 'outside' a system are never simple or uncontested since everything is always interacting and interfacing with others and the environment organically (Cilliers 2001, p. 142, cited in Larsen-Freeman 2012). We tend to draw lines of division and assign things into categories that may not exist. "Boundaries are still required if we want to talk about complex systems in a meaningful way–they are in fact necessary..." (Cilliers 2005, p. 612, as cited in Larsen-Freeman 2012), but we need to make strategic considerations when drawing them (Larsen-Freeman 2012). It is out of this philosophical unification of "oneness" and "discreteness" that I propose a dual-motivation system among multilinguals.

A dual-motivation system is preliminarily defined as a coexistence of two distinct yet related motivation systems within a learner of two additional languages learned subsequent to their first language. Man et al. (2018), based on empirical survey and interview data from a group of Hong Kong undergraduates learning Japanese as their L3 (with a long prior experience of learning English as L2), argue for the existence of this complex system. They observed two main characteristics from the data: the first one is concerned with the "discreteness", which denotes the separation of L3 motivation from L2 motivation; the second characteristic pertains to the "oneness" notion that the two motivational forces are interconnected and exert reciprocal influences. Next, we further delineate the nature of this new conceptual framework.

### 3.2. Nature of a Dual-Motivation System

First and foremost, one's L2 and L3 motivations are distinctive to a great extent and deserve separate status, as previously argued. Man et al.'s (2018) mixed-method study discovered that there was an obvious disagreement between the L2 and L3 motivational scales in terms of instrumentality (more for L2 English leaning), integrativeness (more for L3 Japanese learning), cultural interest (for L3 Japanese while international posture for L2 English), positive learning experience (with L3 Japanese), and milieu (social environment being quite irrelevant to L3 Japanese learning) in their questionnaire surveys. The two motivational subsystems exhibited divergent trends in almost every aspect of motivational components (with the only exception of L2 confidence which is, however, low in both languages). Similarly, Henry's (2011a, 2012) findings supported a separate L3 motivation and even L3 identity from those associated with an existing L2.

Second, the two motivational forces for L2 and L3 are, at the same time, related to each other and thus have the potential to exert reciprocal influences as they take place within an

individual learner. Man et al. (2018) showed that L3 Japanese learners (with English being their L2) held a consistent attitude towards the languages being learned and the speakers and communities of these additional languages, which indicated a global orientation rather than "integrativeness" in Gardner's terms. This research also points to a high affinity between L2 and L3 motivation in terms of instrumentality. All of this suggests some shared ground between these two subsystems of motivation. However, the relationship between L2 and L3 motivation is not only collaborative but competitive. Learners have competing demands on cognitive resources and competing directions in which effortful behaviours can be channelled (Oyserman 2007). It is only natural that when L3 learning joins in, one's L2 motivation would be undermined, as one's cognitive resources are limited, and their distribution requires prioritising. As Oyserman (2007) pointed out, possible selves often end up in competition with each other to generate motivation for a future objective. Man et al. (2018) found that their participants held an opposite attitude towards the positive L2/L3 learning experience. They argued that their participants showed intrinsic motivation for L3 Japanese, but extrinsic and instrumental motivation for L2 English. In this case, one's L3 was a choice, while their L2 was not. Their research hypothesised that, with higher motivation in learning, a self-selected L3 could compromise motivational force in the compulsory L2. Therefore, there are both collaborative and competitive mutual influences in this dual-motivation system.

If we agree to the proposed dual-motivation system, which by definition comprises an L2 and an L3 subsystem, an imminent question arises as to which subsystem will become dominant in a specific situation. Markus and Nurius (1986, as cited in Henry 2014) believe that the individual possesses a range of different domain-specific possible selves. However, only the possible selves that have been triggered by a particular situation and are contextually salient will get activated in cognition at any particular instance in time. Therefore, L2 and L3 subsystems of motivation may not work simultaneously, but instead, wait for contextual cues to mobilise them into generating and directing motivated behaviours. Cognitively active possible selves will convene to form the "working-self" as a self-concept at a given time (Markus and Nurius 1986, as cited in Henry 2014). In Man et al.'s (2018) study, for example, the L3 working-self of the learners was a communicatively competent Japanese speaker who did not necessarily reach the native proficiency. Other possible selves, such as their L2 (English) self, were not activated in this L3 learning context. The elements in this combination will fluctuate continuously according to changing environment (Henry 2014).

This dual-motivation system where L2 and L3 selves coexist to generate a multilingual self-concept as a complex system still has sensitive dependence on its initial condition. Even the smallest input can trigger great consequences as the input interacts with other elements, e.g., the extant L2 motivational self-system. An additional L3 motivational drive is likely to induce comparisons between L2 and L3 learning experiences. For example, when the more fun-laden L3 Japanese class was contrasted with the L2 English's rote drilling at the secondary school in Man et al. (2018), the latter-coming L3 motivation tended to impose negative influence on these Hong Kong learners' L2 (English) motivation. The L3 subsystem of motivation was seemingly eroding the vitality of the positive L2-self, if any, and fuelling the negative attitude towards the L2 previously learned. Another study illustrating the point that a balanced distribution of L2 and L3 motivational forces among multilinguals is difficult to sustain is Henry (2010), which arrived at an opposite conclusion. In a Swedish upper secondary school context, Henry found that students of L2 English and L3 (French, German, or Spanish) interpreted their L3 selves negatively in comparison to their L2 selves, which further lowered their L3 motivation. These two interesting but contrasting studies both point to the fact that the growth and attrition of L3 motivation occur in a nonlinear fashion and show chaotic developmental trajectories when a diversity of contextual factors come into play.

The last question is related to the terminology per se. At first glimpse, the term "multi-motivation system" rather than "dual-motivation system" is more appropriate for

multilingual learners. However, as we have discussed in Section 1.2 above, NNLs should be differentiated into two levels, i.e., L2s and L3s, based on cognitive maturity. It is, therefore, more sensible to make a two-level rather than a multi-level distinction between the complex multilingual learning motivational dynamics. It is important to say, though, that such a division is made in recognition of the dual-motivation system as a wholistic unity within an individual learner. The two subsystems of L2 and L3 interact to enable the formation of the dual-motivation system.

## 4. Implication of the Dual-Motivation System for Teaching Additional Languages

From the above discussion on the nature of the dual-motivation system, some pedagogical implications transpire in multilingualism, especially for L3 learning. Some basic principles inevitably concern how to keep harmony between the two subsystems of L2 and L3 motivation within this dual system and how to alleviate potential detriments, if any, on one another. Specifically, we can review the following implications based on Jessner (2008) and Henry (2014) and extend our discussion to the those related to the dual-motivation system.

On the premise that L3 learning differs fundamentally from L2 learning, Jessner (2008) provides four areas of recommendations for teaching L2 and L3, which, from the viewpoint of this paper, may help generate harmonious L2-L3 motivational systems. The first suggestion is that teachers must appreciate the fact that L3 learners do not start from scratch. Therefore, teachers should draw students' attention to the potential advantages of prior L2 learning experiences. Jessner (2008) explains how L3 teaching needs to incorporate the strategies, skills, and learning experiences from previous language learning into the student's current L3 work plan. Therefore, Henry (2014) further suggests that the development of skills involving comparison and inference be actively encouraged and integrated in third-language teaching. Secondly, Jessner (2008) argues for a need for students to look for similarities between all NNLs, as previous literature (e.g., Busse et al. 2020; Hopp and Thoma 2021; Leonet et al. 2020) had shown how useful it would be if learners could effectively utilise other NNLs in L3 learning. Teachers should provide guidance for developing approaches aiming at active cross-referencing between the L3 and other NNLs to identify similarities. This applies not only to the teaching, but also to the learning materials, where comparisons of L2 and L3 can be made. The third proposal is teaching across languages. Jessner (2008) provides an example of making use of L2 English usage as a didactic tool for the teaching of German L3. Again, this involves employing prior knowledge in an NNL for the benefit of L3 learning. The fourth suggestion concerns strategy training, which has proven beneficial in previous literature (e.g., Bui and Kong 2019 for metacognitive training; Mißler 1999, 2000 for cognitive learning strategies among multilingual learners). Specifically, teachers should encourage students to reflect on their implicit strategy use in informal/naturalistic language learning contexts and transfer concrete strategies into instructed L3 learning. All of these recommendations could help balance the learning motivations among all additional languages, including L2(s) and the newly added L3, to reach a complex yet optimal state.

Henry (2014) further proposes how the two motivational forces, i.e., L2 and L3 motivation, that are conceptualised as a dual-motivation system in this article, could be important for pedagogical development. He explains the importance of recognising the challenge that an L2 may have a pernicious effect on L3 learning motivation when this L2 enjoys a higher social status or extensive societal presence. Even though the abovementioned search for L2–L3 similarities and the activation of previous L2 learning experiences may benefit L3 learning, Henry argues that teachers must be aware of how this type of cross-referencing can result in negative and motivationally damaging appraisals of the L3 self-concept concerning a more "vital and phenomenologically robust L2 self-concept" (p. 17). Therefore, L3 teachers should introduce the concept of possible selves to L3 learners and encourage them to develop an ideal L3 self as early as possible to mitigate the possible damage a prestigious or pragmatically more important L2 would induce on L3 motivation. In connection with

this, we may discuss better harmonising L2 and L3 motivations from the dual-motivation system perspective. When learners develop a stronger motivation in learning a self-chosen L3 and make unfavourable comparisons with their existing L2 learning, L2 teachers can guide learners to transfer L3 learning motivation into L2 learning. As Bonnet et al. (2018) and Busse et al. (2020) argue, positive learning experience in an additional language (be it L2 or L3) can trigger better motivation for learning another. This argument is in line with the current proposed framework that the L2 and L3 motivations can also work for some learners as "connected, supportive growers" in CDST terms.

## 5. Conclusions

With an introduction to multilingualism and the CDST, this article reviews the concepts of L1, L2 and L3, and then explores the notions of L2 and L3 motivation. Reviewing prior research, a relatively new theoretical framework of a dual-motivation system is proposed to conceptualise the motivational drives and dynamics among multilingual learners. This paper explains the nature of this new construct and why it is a better alternative to a separate L2 or L3 motivation. It is argued that a nuanced understanding of the L2–L3 dual motivation system would have a positive impact on multilingual education.

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