

Spanning Systems and Ecological Fluidity: A Revised Ecological Development Model for International Students

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ABSTRACT

The growth of the number of persons pursuing education outside of their home country has created a relatively new population of transnationally mobile students who experience a pivotal developmental period crossing and across international borders. There are few suitable theoretical models to examine the developmental experiences of this growing population. In his last publication, Urie Bronfenbrenner acknowledged his ecological model was a developmental yet evolving model to be tested and amended by incorporating new evidence. This conceptual paper draws from existing empirical work to advance the ecological model and revise it to be more applicable to and explanatory of developmental experiences of international students in the United States. The resulting model, which we call the *Spanning Systems* model, can be used to identify spaces of potential contradictions or learning in a student's development.

Keywords: ecological model, international students, multiple ecologies, student development, student mobility

INTRODUCTION

The growing number of international students enrolling in U.S. higher education organizations is a well-documented phenomenon (Institute of International Education [IIE], 2018). Higher education is a catalyst and channel for transnational mobility, but international students face unique challenges regarding the collegiate experience. Students whose culture of origin is not the dominant culture of their institution often experience difficulties adjusting to the new context (Braxton et al., 2004). Postsecondary organizations do not have appropriate frameworks for understanding student experiences or building strategies to support these students' cultural adjustment (Owens & Loomes, 2010). Instead, they often place the onus of responsibility on the students to navigate the complexities of new cultural, sociopolitical, and historical contexts.

Particularly, we are writing in a time and space when the global COVID-19 pandemic and its resulting disruption has affected nearly every facet of life across the planet. International higher education and the transnational mobility of students and scholars have been particularly impacted from the beginning as those abroad in the United States worried about their families back home in affected areas. As the threat amplified, campuses closed and shifted to online course delivery. This prompted the Student and Exchange Visitor Program to announce “flexible adjustments” to student visa requirements related to remote learning even as international students adjusted to the new format (Cheng, 2020). Some students were left scrambling to find a place to live when their dorms closed (Dickerson, 2020). As the virus spread and governments reacted with travel restrictions, some international students began worrying about whether they would be able to return home or back again (Cheng, 2020). The resulting economic fallout from COVID-related shutdowns also caused layoffs and budget cuts affecting international students with employment on campus (Dickerson, 2020). All of these coincided with a surge of xenophobic racism directed against Asian students (Cheng, 2020). Educational experiences for all students are inextricably intertwined with history, politics, economics, and daily life. International students who have not spent their lives embedded in the host country's environment, however, will almost assuredly have different educational experiences than those who have not left home. The above framing of COVID is but an example of how international student experiences are made more complicated by the various spaces they encounter and the policies and contexts that shape those spaces.

All of this points to the necessity of a developmental model for international students that focuses on students' interactions with their environments. Bronfenbrenner's (1979, 2005) ecological model offers such a perspective and has been applied to international students in prior research (Zhang, 2018). The model demonstrates the interactions of environmental factors such as culture, politics, economics, and day-to-day interpersonal interactions and how these factors shape students' development. This helps to explain students' experiences as they deal with the historical and contemporary structures of the United States. Prior ecological models, however, are unable to capture the experiences of those students who cross borders to pursue their education. International students are dealing and interacting with the contextual elements of U.S. culture (Lee & Rice, 2007). However, they enter these spaces with the knowledge, experiences, and other influences gained from their own culture, not knowledge born and grown exclusively in the United States. To create a model with explanatory power for this population, further revision is necessary to represent the development of international students and the complex environments they inhabit.

In this conceptual paper, we suggest a more appropriate model that recognizes the essential influence of environmental factors in both the United States and the students' home country context while also acknowledging these two contexts exist in some separate and some overlapping spaces. International students are shaped simultaneously by two different ecologies, one of their home country and that of their host country, the United States. This proposed model, called the *Spanning Systems Model*, highlights the roles of each ecology in students' lives, allowing for scholars and practitioners to identify interactions between students' home context and the United States, opening a potentially fruitful line of inquiry into how international students make sense of structures in their host country pinpointing spaces of contradiction and oppression of international students, and helping institutions develop strategies to aid international students in navigating the realities of living in the United States.. The *Spanning Systems Model* builds upon previous literature and ecological models of development, revising and expanding the model to be applicable to students spanning multiple ecologies.

To describe the reasoning behind the proposed developmental model revision, the following section provides a brief overview of international students and their experiences in the U.S. Bronfenbrenner's ecological model is then explained as well as critiques of the model relevant to international students. Finally, these critiques are used to develop a revised ecological framework that better accounts for international students' experiences and contextual knowledge. The *Spanning Systems Model* is useful for understanding international students developmental experiences because it a) acknowledges the complexity of mobility among ecologies while appreciating that such mobility is not necessarily unidirectional; b) recognizes that said mobility means an individual is never entirely within or outside a given ecology; and c) conceptualizes the process through which an ecology can continue to be relevant, despite an individual's shifting geographic location over time.

INTERNATIONAL STUDENTS AND MULTIPLE ECOLOGIES

The extant literature on international students alludes to the types of challenges and experiences they encounter due to crossing contexts. Once international students arrive in the host country, they are embedded in a new ecology structuring their experiences. In the United States, international students are potentially surrounded by languages and cultures different from those through which they have been educated and socialized. Students from non-English speaking countries are challenged to master college/graduate-level material and interact with classmates and instructors in English (Andrade, 2006; Poyrazli & Kavanaugh, 2006; Zhang & Goodson, 2011). Even students who are fluent may experience barriers; they too may feel anxious about their accent and catching subtle nuances (Sawir et al., 2012). Differing cultural norms also serve as a challenge to some international students' successful adjustment. Cultural meanings of eye contact, classroom interactions, and gender roles are all complexities international students must navigate (Lee, 2015; Lee & Opio, 2011).

Time, in part, eases international students' challenges as they socially and culturally adjust to life in the United States (Wilton & Constantine, 2003; Zhang & Goodson, 2011). Difficulties they experience, however, are more than individual adaptation; they are closely related to larger societal issues in the United States, such as discrimination and oppression based on race/ethnicity and nationality. Many international students experience widespread discrimination and hostility against them, including but not limited to ignorance of their presence and abilities, exclusion from social interactions and administrative services, and invalidation of non-American issues (Kim & Kim, 2010; Lee & Rice, 2007). Nonetheless, the extent to which students perceive discrimination differs by their racial and nationality backgrounds. International students who identify as white are less likely to perceive discrimination (Lee, 2010; Lee & Rice, 2007; Poyrazli & Lopez, 2007) and more likely to actively interact with Americans (Gareis, 2012; Trice, 2004) than students who do not identify as white. Students of color reported overt discrimination and even harassment based on their racial identity and nationality (Constantine et al., 2005; Hanassab, 2006; Lee & Rice, 2007).

Interpersonal interactions and relationships are essential components shaping international students' experiences. Studies suggest that social support plays a vital role in international students' overcoming such difficulties. International students get support from their family and friends in their home country as well as other international peers residing in the United States when they experience emotional and practical struggles or isolation (Chavajay, 2013; Zhai, 2002). Interactions with Americans are critical, as such interactions reduce acculturative stress and increase international students' satisfaction (Al-Sharideh

& Goe, 1998; Chapdelaine & Alexitch, 2004; Hendrickson et al., 2011; Perrucci & Hu, 1995; Yeh & Inose, 2003).

BRONFENBRENNER'S ECOLOGICAL MODEL AND CRITIQUES

Given the unique spaces inhabited by international students, it is crucial to create a model that helps explain their developmental context as students in the United States. Bronfenbrenner's model is a useful framework as the experiences of these students are directly shaped by their interactions with cultural values, environmental aspects of discrimination and oppression, and specific instances of interaction with faculty and peers within a university context.

Bronfenbrenner's ecological theory is made up of four mechanisms that influence development (1979, 2005). First, *process* is the interactions between the individual and the environment through which development occurs. Second, *person* is the characteristics of the individual that define how the individual will interact with the environment. Third, *context* is what makes up the environment. *Time* is the final mechanism, speaking to both the broad historical context of the individual's life and the moment in the individual's life certain events are occurring.

The hallmark of Bronfenbrenner's ecological approach is the nested systems in which an individual is situated, composing the *context*. From the center out, an individual is part of a variety of *microsystems* such as school, family, and peer groups. Within this layer, a variety of activities, roles, and interpersonal relationships are perceived and interpreted by an individual, in turn shaping his/her development. The second layer, the *mesosystem*, is described as comprising the connections of two or more of the settings within the microsystem (e.g., school and home). Conceptualizing the mesosystem allows for scholars to grapple with how interactions in one proximal context are influenced by another. For example, a student's interactions in school are likely to be influenced by their parent's view and value of education. The remaining systems in the ecological model, the *exosystem* and the *macrosystem*, incorporate settings that do not directly contain the developing individual. The *exosystem* is only partially proximal to the individual and contains connections of systems containing the individual. The parent's workplace or a school board are typical examples of elements of the exosystem (Thomas, 2005). Finally, the *macrosystem* incorporates the attitudes, values, and norms of broader society, often termed the *cultural milieu* (Bronfenbrenner, 1979, 2005). Later, Bronfenbrenner added the element of the *chronosystem* to allow for consideration of how a developmental ecology shifts over time and the notion of *proximal processes* to grapple with the idea of organism-environment interactions through which "genotypes are transformed into phenotypes" (Bronfenbrenner & Ceci, 1994, p. 580).

Critiques

In this theory, the macrosystem is described as monolithic, structuring all other systems and experiences underneath. Macrosystems "may be thought of as a societal blueprint for a particular culture or subculture" (Bronfenbrenner, 2005, p. 81), thus for Bronfenbrenner each macrosystem is a distinct ecology, structuring separate systems within that culture. Bronfenbrenner (2005) acknowledged different macrosystems on the global level, referring to "macrosystem contrasts" (p. 159) as useful for interesting research designs in order to understand the effects on persons developing in these variant contexts. There is no consideration, however, of what it might be like for someone to span multiple contexts during their development. International students' experiences are largely defined by spanning different sociohistorical contexts and cultural values. The cultural values shaping their experiences are hardly monolithic; instead, they are a contradictory swamp of norms and mores. Students were socialized into specific ways of thinking

and behaving for their entire lives to the point that the cultural influences became invisible. Now suddenly, they must adapt to another culture's minutiae without years of socialization. Students could navigate disparate cultures with proper institutional and peer support at the microsystem and mesosystem levels (Constantine et al., 2005), but, in many cases, this support is lacking.

We are not the first to consider a transnational adaptation of an ecological approach. A handful of scholars adopted and adapted the ecological framework with the topic of cross-cultural and cross-border movement in mind (Elliot et al., 2015; Ward & Geeraert, 2016). These approaches can be classified into two categories. The first approach (Elliot et al., 2015) recognizes distinct ecologies but emphasizes movement from one to another. The second approach (Ward & Geeraert, 2016) conceptualizes cross-cultural experiences as overlapping ecologies, where a person exists and develops at the intersection of two divergent ecologies. These adaptations significantly advance our understanding of the issue of moving/existing among multiple ecologies and our theoretical interpretations of ecological systems. Despite these advancements, there is room for improvement.

The primary contributions of Elliot and colleagues' (2016) interpretation are that the model acknowledges the element of *mobility*, separate ecologies depict cultural distance, and such a model implies there are elements of the home ecology that will travel with the "student sojourn" as they confront new systems (p. 2215). A flaw with the model, however, is the authors choose to nest the entire ecology of the home system within the microsystem of the host country. While it is useful to acknowledge that values and norms, as well as people and institutions, in the home context are likely to continue to be influential within the new context, placing an entire ecology within the microsystem is not an ideal way to theorize such a process. It is not wholly logical to think of social values, norms, institutions, individuals, etc., actually being moved to and situated within a new context. Another flaw with this model is the "sojourn" is unidirectional. While unidirectionality might be useful for conceptualizing challenges faced by the initial move (i.e., acculturation challenges or culture shock upon arrival), such a model has limited applicability for students as they move or graduate and consider more complex mobility options (Findlay, 2011).

Ward and Geeraert's (2016) model addresses the issue of a home ecology being embedded within a new ecology by recognizing that acculturation challenges are likely to take place where systems bump up against each other, intuitively conceptualizing these systems in contact and conflict. The notion of overlap, however, implicates this approach in a similar problem to that suffered by Elliott et al.'s (2016) model: it does not quite seem logical to have overlapping systems. Norms in the macrosystem are not interacting, policies and institutions in the exosystem are not engaging, and people within the microsystem are not intermingling as the model would suggest. Similarly, the overlap interpretation implies at least part of each system is embedded with the broader systems encapsulated in the opposing ecology. Although elements in these systems are likely to both be relevant for an individual, the systems themselves are not contained or constrained by broader systems in the opposing ecology. For example, brain return policies in China are not constituted along the lines of a U.S. cultural or values system. While some elements might interact (e.g., parents interacting with peers while visiting from home), the broader ecologies and their systems are likely more distinct.

SPANNING SYSTEMS MODEL

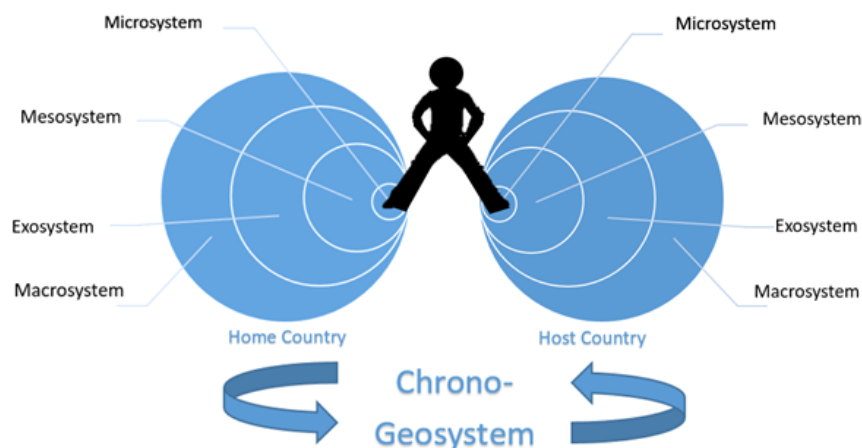
Ecological models should thus be revised to include multiple ecologies, simultaneously influencing the development experience, and each with its own macrosystem, exosystem, mesosystem, and microsystem. This proposed model utilizes the classic nested systems format that is the hallmark of

Bronfenbrenner (1979, 2005) models. Rather than one ecology with the individual nested in the middle of the microsystem, the *Spanning Systems Model* situates the individual across two separate ecologies. At the center of the model is the individual, with a foot in the microsystem of each the home and host ecology to symbolize how the individual shapes and is shaped by the context in which they are embedded (see Figure 1). Functionally, individual development within a given ecology occurs in the same way described by Bronfenbrenner and his adherents, through interactions among the systems. The student exists in a distinct location between ecologies in what ideally could be a harmonious blending of contexts, a space for building multicultural competency, or an opportunity for critical reflection on cultural assumptions. The creation of third cultures that blend the home culture and host culture is a well-documented trend in the literature on study abroad, and these third cultures can still produce valuable learning outcomes related to diversity (Twombly et al., 2012). Acknowledging the influence of detrimental factors, however, the *Spanning Systems Model* can also help reveal spaces of severe discomfort and marginalization based on race and nationality. The model can thus be used to interrogate both positive relationships as well as marginalization. Given appropriate institutional support, international students could co-create with their schools and peers this space of positive development (Constantine et al., 2005), but with the existence of discrimination, the model also helps explain marginalization.

The *Spanning Systems Model* represents the multiple ecologies in which the students simultaneously exist (see Figure 1). Their college experience is shaped by each individual ecology and spanning between the two. Each component of the model will be different for each individual, but the overall design of the *Spanning Systems Model* will remain the same. The major departure from Bronfenbrenner's (1979, 2005) approach happens when an individual departs the home ecology to move to another, during which an individual brings something from their original ecology into their new one. Keeping the two systems separated, connected only through the individual, enables this model to overcome the shortcomings of the previous adaptations discussed above. Any interplay among divergent systems is likely to be a direct result of decisions or connections made through the individual at the center who bridges the ecologies, whether through geographic movement, technology, or a personal blending of cultural constructs.

Figure 1

The Spanning Systems Model



Microsystem

While studying in the United States, international students maintain their relationships with family, friends, and colleagues in their home countries. Especially as information and communication technologies have developed, international communication is easier than ever. International students can contact people in their home countries and thereby continue to be influenced by these microsystems despite physical separation. Interactions with family, friends or significant others can have emotional and psychological effects on international students (Misra et al., 2003; Zhai, 2002). Encouraging words from loved ones can ease stress in unfamiliar environments and motivate them by reminding them of the original purpose of studying in the United States, but imposing a burden of meeting expectations. Relations with people in the home country and roles imposed by them can also determine the frequency and length of home visits and even stay-return decisions after graduation (Hazen & Alberts, 2006; Wu & Wilkes, 2017). Technologies also allow international students to gain collaborative work/research opportunities from their home country without physical attendance. These work-related interactions help the students apply what they have learned in the United States to their home contexts and thereby can expand their understandings of their studies as well as develop future career plans.

The campus life of international students in the United States involves new relationships with roommates, classmates, club members, faculty, etc. These interpersonal relationships make up much of international students' experiences and subsequent development (Glass et al., 2015). Macro social forces, located in the U.S. macrosystem and affecting all subordinate systems, underlie these relationships. The social norms and mores of interpersonal interactions structure conversations, expectations, and reactions. International students' microsystems in the United States are not confined to interactions with Americans. Many international students are involved in associations of students from the same home country or cultural backgrounds. This type of community, by functioning as enclaves within unfamiliar environments, buffers the students against isolation (Chen & Ross, 2015).

Mesosystem

The coexistence of multiple microsystems and the interconnection of the systems through the developing individual form another layer of system in the individual's ecologies called the mesosystem. In the mesosystem, interactions, roles, and activities in one microsystem affect those in other microsystems. For example, international students who experience more difficulties and discrimination in relationships with American classmates may spend more time with other students from similar backgrounds, influenced more by those students than American peers. One thing to note here is that the interconnections of the microsystems are not limited to one ecology. Although international students' microsystems in their home country and in the United States exist in physically separate locations, their connections cross the borderlines, constructing the integrated mesosystem surrounding the developing individual. Examining international students' interaction patterns in microsystems at home cannot be separated from the impact of microsystems in the United States and vice versa.

The mesosystem in the *Spanning Systems Model* is therefore shared between ecologies, depicted in our model by a dashed line (see Figure 2). We posit this shared mesosystem is the natural extension of the transnational student's positionality, whereby all interactions between microsystems are mediated by and exist due to the student at the center of the model. In other words, the shared mesosystem, and whether and to what degree elements in that system interact, is determined largely by the student. For example, a student's parents or friends from the home ecology may interact with friends from the host ecology, but

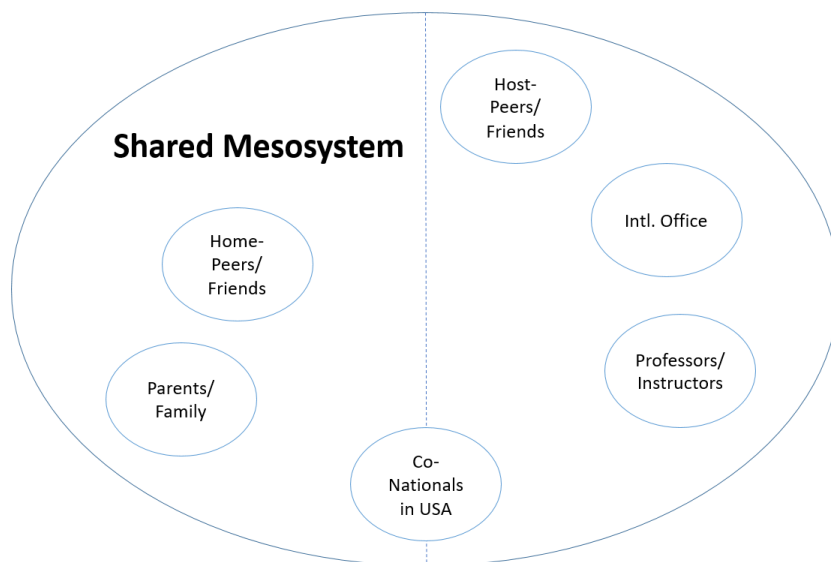
that interaction is because of the connection created and facilitated by that international student. Geographical distance otherwise makes such an interaction incredibly unlikely, thus different microsystems, though within a single mesosystem, are separated and mediated by the individual student.

Exosystem

The exosystem encompasses settings that significantly affect international students but do not directly involve the students (Bronfenbrenner, 2005). International students studying in the United States are influenced by the exosystem that exists in the United States and in their home countries. The students' families' workplaces typically exemplify a component in the home country exosystem that directly affects international students but do not directly involve the students (Renn & Arnold, 2003). Even if an international student's parents' workplaces are abroad, the family work environment can have a direct effect on the student's financial stability and persistence, especially if the student is being funded by family savings/earnings (Lee, 2015). An unexpected termination or bankruptcy might put the student's funding source into jeopardy. This can be particularly problematic for international students as they do not qualify for federal aid, and many students' visas do not qualify them for work (United States Department of State, n.d.). If a student's education is funded through home country government support or a scholarship from home country-based organizations, stipulations attached to these types of funding mechanisms, such as post-graduation residency requirements or employment contracts, will affect the student's post-graduation decision making. In the same vein, emigration policies are also part of the home country exosystem.

Figure 2

The Shared Mesosystem In The Spanning Systems Model



As international students physically move to the United States, the exosystem that exists in the United States exerts its influence on the students. The U.S. institution adjusts itself to accommodate the needs and assets of international students by creating support programs for the students and revising/developing curriculum. Faculty curriculum committees and institutional policymakers represent actors that influence international students without directly involving students (Renn & Arnold, 2003). Immigration policy is another component located in the U.S. exosystem. Nationalism and racism in the U.S. macrosystem structure the U.S. exosystem to craft immigration policies such as the perpetual

surveillance of the Student and Exchange Visitor Program and barriers to entry through the visa process (Grimm, 2019). Students may encounter difficulties throughout their time in the United States because of immigration issues (Lee, 2015), even to the point of requiring authorization from their university's international office to travel outside of the United States. International students are often discouraged from traveling in some cases in case border officials find something wrong with the students' immigration documents, barring them entry.

Macrosystem

Each society has its own historical, social, and cultural contexts that construct the macrosystem. These contexts underlie the society at large, forming social structures, institutions, and behaviors/thoughts of the members of the society (Bronfenbrenner, 2005). Socialized and educated in a given society, people learn and internalize language and cultural/social norms and values. International students, carrying their own formative experiences from the contexts of their home countries, encounter the U.S. macrosystem. The home country macrosystem underlies students' experiences and directly affects how they make meaning of their experiences. Exposed to the two macrosystems, international students expand their understanding of different cultures and ways of knowing/thinking (Glass et al., 2015). At the same time, however, students experience the difficulties and tensions that fundamental differences can cause. When there are significant differences between the home and host societal values, adjustment issues become more prevalent (Parham, 2002). Furthermore, hostility against racial/ethnic groups or international students originated from sociohistorical and political contexts and forms tough environments for international students (Lee & Rice, 2007). The broad social forces such as racism and nationalist sentiments underlie the students' daily interactions in the United States, framing how international students are perceived and treated on and off campus by faculty, staff, fellow students, or individuals unaffiliated with the institution.

Chrono-Geosystem

An additional element is that which we term the *Chrono-Geosystem*. In the model (see figure 1), the *chrono-geosystem* is positioned within circling arrows in order to signify mobility across *time* and *geographic* space. Bronfenbrenner's component of the *chronosystem* allows for theorization of development as contexts may shift over time yet does not consider how geographic location might also change with time. Given recent patterns of mobility, particularly among the highly educated (Choudaha, 2017; Robertson, 2013), movement is neither unidirectional nor permanent. Adding this element allows for consideration of how an individual implicated in complex mobility patterns will be subjected to and interact with variant systems as they span contexts, making such a model applicable for interrogating multiple types of mobility. With these adaptations and additions to the original ecological framework, this model offers an adequate solution to the theoretical question posed previously by providing a way to conceptualize the complexities of existing/moving between/among two divergent ecologies.

Person

To speak to the other aspects of Bronfenbrenner's (2015) model beyond context, *person* is an individual's characteristics that shape how they interact with the environment. Based upon their race and nationality, international students are automatically subject to prejudicial and discriminatory interactions from other individuals. These are beyond the control of the students, forced onto them without their consent by the U.S. macrosystems of racism and a history of oppression (Lee & Rice, 2007). Carrying the designation of "international" student can also inhibit specific interactions. Domestic peers and faculty

may be reluctant to interact with international students at all due to preconceived notions of race, nationality, and behaviors (Constantine et al., 2005).

Students engage with these interactions at varying degrees of energy and complexity. For example, students might find cultural enclaves within the institution in which they feel safe and included, contributing to their social integration and likelihood of persistence (Braxton et al., 2004). They may, however, be unable to find such an enclave and withdraw in social isolation. In terms of increasing levels of complexity of activities, students may grapple with racism and discrimination they experience in the United States, or they may choose to focus on their own studies. Engaging in complex activities is associated with the students' perception of their own levels of agency in the control of their interactions (Glass et al., 2015). Students who perceive themselves to have little agency may struggle even further to find a cultural enclave within the institution or to make sense of acts of discrimination. Students who perceived themselves to have high agency may become involved in campus activism to combat institutional racism and daily acts of oppression.

Time

Each student's developmental experience occurs within the overarching context of time. Depending upon the period of the students' lives, they may already have solid understandings of their own identity in relation to the U.S. context. They may also have different familial or financial obligations based upon their age. Time refers to the historical period in which interactions are occurring as well (Bronfenbrenner, 2005). Changes in growth rates of international student enrollments are chronologically tied to increasing mobility and economic globalization, as well as the subsequent backlash of global far right movements against immigration and globalization (IIE, 2018). All of these are broad aspects of this period in time that will shape the experiences of international students.

LIMITATIONS AND IMPLICATIONS

The context, person, and time components discussed here are only possibilities of the ecological influences that may likely appear in an international student's environment based on the literature. The content of the different systems is less important than the form of the model as separate ecologies connected through the individual spanning the ecologies. Each student will carry different cultural understandings and experiences from their home country, and each student will experience the United States differently. The components described here are based on the literature on international students broadly, but not all of these influences will apply to every student. Some of the components are more generalizable than others. Each student will have unique systems shaping their experiences. This may be due to specific circumstances, such as unique individual dispositions and the role of the student's family, or it may be due to differing large societal forces. When utilizing this model, it is vital to respect this diversity by allowing flexibility in what components make up each system.

This framework has the potential to help identify specific spaces in which international students experience and make sense of historic and contemporary social structures during their postsecondary education, as well as their own cultural adjustment, by placing equal attention to the environment from which they are coming. By better understanding the interplay between the United States and the students' own backgrounds, including everything from personal characteristics to their countries' sociohistorical backgrounds, faculty and staff can provide the necessary support to help international students succeed in the United States. This model's acknowledgment of the major historical and contemporary societal structures highlights how institutions must take an active role in creating spaces to help international

students respond and adjust to new, often contradictory contexts. Bronfenbrenner made significant contributions that encourage social scientists across disciplines to consider human development experiences from a variety of units of analysis that create the development context of an individual (Ceci, 2006). We build on this work to consider development experiences that span multiple ecologies and the structures embedded within.

The *Spanning Systems Model* additionally implies a degree of uncertainty in the direction of student development. Many well-known student development theories showcase specific types of growth in students as in moral development (Kohlberg, 1969), college student identity (Chickering & Reisser, 1993), or gender identity development (Bilodeau, 2005). The *Spanning Systems Model* does not delineate *how* students might grow. It only identifies the influences that will shape this growth. This limits the explanatory power of the model, as the purpose of a student development model is to understand how students grow, but it also expands the possibilities of what to expect from students. Colleges and universities may be less inclined to attempt to guide students through narrowly defined corridors of success instead of helping students navigate their ecologies as they define their own goals, using the *Spanning Systems Model* to identify spaces of contradiction or opportunity. This limitation may actually be a valuable tool in building students' capacity for self-determination.

CONCLUSION

This revised model, or the *Spanning Systems Model*, helps to explain how international students are positioned among the historical and contemporary structures they encounter in the United States after arriving from divergent sociohistorical and cultural backgrounds. These structures are grounded in political, economic, and historical contexts, so international students cannot be expected to easily navigate these systems without support from the institution. As such, the *Spanning Systems Model* has implications for future practice and research related to international students in higher education. For the innumerable benefits international students provide to colleges and universities, institutions are responsible for ensuring these students have physically and emotionally safe experiences in the United States. By understanding students' home culture, acknowledging and combating the existence of oppression, and offering the necessary support to international students as they adjust to life in the United States, practitioners in colleges and universities can begin to convert spaces of marginalization into spaces of cross-cultural learning and growth. This model provides the tools and language for understanding international students experiences and development as well as identifying opportunities for engagement. Scholars might use this framework in their approach to research international student experiences to either posit research questions or account for the complex context in which this population is embedded. Additionally, although this model was adopted with international students in the United States as our population and context of interest, the model could be further adapted to account for the developmental contexts of any individual whose life spans multiple ecologies.

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