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INTRODUCTION

Applied linguistics in the age of anxiety

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It seems apt to allude to W. H. Auden's titular poem, "Age of Anxiety," as we introduce this, the 43rd issue of the *Annual Review of Applied Linguistics*. The poem was written in the midst of social, political, and psychological upheavals resulting from World War II. Today, the world is still grappling with social, political, and psychological upheavals amid global conflicts as well as the COVID pandemic. The applied linguistics and language learning landscape we find ourselves in today seems no different. Throughout second language acquisition research, the emotion of anxiety has been one of the most studied affective variables (Gass et al., 2020) and yet remains one of the more elusive variables to characterize and operationalize, given how highly personal, multidimensional, and vulnerable each of our experiences with anxiety is.

Some attempts to characterize anxiety frame it as a kind of filter through which individual second language skills are experienced, such as speaking in another language. Other characterizations take a more global approach, portraying anxiety as a micro-reaction to macro-stresses, such as experiencing pressure to learn another language, especially if that language is the *lingua franca*, the learning of which can be viewed as the difference between an individual's success or failure. In both of these examples, anxiety can affect a learner's ability to process and recall new information, making second language learning and performance an anxiety-provoking task. It may, then, be no surprise that anxiety has traditionally been viewed as one of the primary obstacles to language learning. This is evident in early constructs like the *affective filter hypothesis* (see Dulay & Burt, 1977; Krashen, 1982), which was a metaphorical barrier made up of affective emotions including anxiety that inhibited second language learning, and it was only occasionally, in its mildest form of arousal, viewed as potentially facilitating (e.g., Scovel, 1978). While these early and traditional perspectives on anxiety are still present in much research today, the authors of the current issue challenge readers to continue to reconceptualize the innumerable roles in which anxiety appears to play in second language learning.

In the first article in the current issue by Dewaele, Botes, and Meftah, "A Three-Body Problem," the authors expand the traditional conception of anxiety to create a multi-component framework, integrating it with language enjoyment and boredom. In expanding how anxiety is seen, their paper investigates which of three emotional variables—anxiety, boredom, or enjoyment—best predicts academic achievement in an English as a foreign language (EFL) classroom. The research design used structural equation modeling and cross-sectional data from 502 learners in Morocco. The three learner emotion variables under investigation, *foreign language classroom anxiety*, *foreign language boredom*, and *foreign language enjoyment* were all found to predict

academic achievement. Foreign language classroom anxiety was found to have the strongest negative effect, followed by foreign language boredom and foreign language enjoyment. The authors argue that while foreign language classroom anxiety is the most debilitating of the three emotions and has the ability to hamper student performance in the moment as well as the medium- and long-term, from a complex dynamic systems approach (e.g., Larsen-Freeman & Cameron, 2008; Verspoor et al., 2011), the three variables are interrelated and cannot be viewed without acknowledging their connections. They conclude that foreign language enjoyment and foreign language boredom are crucial variables that teachers can leverage to facilitate learners' performance and ultimate L2 development.

In "How epistemic anxiety and curiosity link perceived value and intended efforts in the language classroom," Nicola Fraschini and Yu Tao focus on emotions related to knowledge and cognition resulting from new information that challenges our previous knowledge systems and/or beliefs. For the current study, the authors differentiate between *epistemic emotions* that lie in the generation of knowledge, as opposed to *achievement emotions* that lie in the achievement of (or failure to achieve) a goal. As such, the authors examined the relationship between epistemic emotions, namely, anxiety and curiosity, and students' perceived value of the language being learned and the intended effort invested into learning that language. Epistemic emotions are increasingly being studied in fields like education, psychology, and neuroscience. The data for their study comes from ninety-one students in Australia enrolled in a twelve-week course for absolute beginners in L2 Korean. While previous research (Hong et al., 2020; Mahmoodzadeh & Khajavy, 2019) found that anxiety negatively affects curiosity, the authors found epistemic anxiety and curiosity to be unrelated to one another, while learners' perceived value and intended efforts were correlated. In addition, they showed intended efforts correlated with curiosity but not with anxiety, affirming previous work finding that curiosity can promote knowledge exploration, task engagement, and willingness to communicate. This study highlights the importance of fostering epistemic curiosity in language education, which may be achieved through the use of challenging learning tasks. Fraschini and Tao also note that we need additional research on epistemic emotions in L2 research in order to generalize about the role of epistemic emotions in the L2 classroom.

In "Like student like teacher? Taking a closer look at language teacher anxiety," Julia Goetze focuses on teachers' perspectives (i.e., *language teacher anxiety*). Since language teacher anxiety has been understudied in relationship to language learner anxiety, Goetze argues for reconceptualizing anxiety from the perspective of the teacher and conducting more research studies addressing language teacher anxiety. Her paper outlines numerous factors that can contribute to language teacher anxiety, ranging from the intra- and interpersonal (e.g., beliefs, confidence, perceptions) to the teaching environment (e.g., target language use, teaching activities, motivation) to institutional and societal factors (e.g., cultural norms, education policies, performance expectations), all of which can contribute to an individual language teacher's anxiety over the course of their career. Using this reconceptualization of anxiety as a construct, Goetze defines different directions for future research that can: (a) be more comprehensive; (b) be more interdisciplinary; (c) focus on situation-specific dimensions of anxiety; and (d) advance research into critical pedagogical approaches to language teaching. Goetze argues that a better understanding of language teacher anxiety can lead to the improved well-being and health of language teachers, which may lead to better language learning environments for their students. In other words, as she concludes, future work into language

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teacher anxiety may "be equally as important and rewarding as [that of the language learner]" (p. 52).

In "Feedback matters: Thwarting the negative impact of language anxiety," Tammy Gregersen points to the original characterizations of language anxiety as an "affective malady" composed of fear of negative evaluation, communication apprehension, and test anxiety (e.g., Horwitz et al., 1986; Horwitz, 2001). Building on Elaine Horwitz et al.'s foundational work, including her *ARAL* piece in 2001, which has led to over 35,000 views of the abstract alone, Gregersen shares that much of language anxiety research has reinforced the idea that feedback is one of the primary concerns when it comes to the ultimate language development, emotional well-being, and linguistic confidence of a language learner. In this piece, Gregersen supplies practical suggestions for language teachers to address these sources of L2 anxiety, particularly through assessment and feedback practices. Implementing *positive psychology* (PP)—an approach attempting to explore how people flourish by identifying and sharing their strengths and values rather than focusing on perceived individual deficits (e.g., Seligman & Csikszentmihalyi, 2000)—to combat language anxiety, Gregersen describes the results of two studies using data from fifteen master's students in a TESOL program in the United Arab Emirates. The studies focus on using approaches accentuating the positive and promoting the personal strengths in individual students in the feedback process rather than focusing on their perceived deficits or solely focusing corrective feedback on linguistic items in the performance of preservice language teachers. One such approach, *appreciative inquiry*, focuses on teachers' existing strengths to promote growth and development. Gregersen uses a case-study approach in one aspect of the paper, highlighting anecdotes from one student, Noor, to demonstrate how implementing appreciative inquiry and focusing on Noor's individual strengths, like creativity, may have been related to the significant decrease she experienced in her language anxiety. In summary, then, Gregersen shows how appreciative inquiry and the use of signature strengths can promote the emotional well-being of language learners.

In an empirical study, Ju Seong Lee and Ming Ming Chiu propose a comprehensive model of the relationship between willingness to communicate and two communicative modalities—face-to-face and digital. *Willingness to communicate* was operationalized as three contexts—in-class, out-of-class, and digital communication. The research took place over two years and was based on the survey responses of 1,269 English learners in South Korea from both the secondary (high school) and university levels of education. Using structural equation modeling with the survey responses, the authors found that students with lower reported anxiety levels showed more willingness to communicate in all three contexts. Specifically, in both in-class and out-of-class contexts, students with higher self-perceived language abilities had lower face-to-face communicative anxiety. Within digital contexts, students who reported higher ideal L2 selves indicated less overall anxiety and were more willing to communicate. In terms of testing their proposed comprehensive model of the relationship between language anxiety and willingness to communicate across the three contexts, Lee and Chiu's findings confirmed past research showing that lower second language anxiety correlates with higher willingness to communicate. In addition, their model builds off previous research by providing a more nuanced understanding of how innumerable individual variables (e.g., age, enjoyment, motivation) relate to language anxiety, willingness to communicate, and communicative context. These findings point towards the implication that there is potential efficacy for the use of interventions that can lower language anxiety as a means to increase willingness to communicate across communicative contexts.

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In "The inner workings of anxiety in second language learning," Peter MacIntyre and Molly McGillivray examine the multidimensional nature of anxiety in language learning and communication. The authors first define and describe how language anxiety has traditionally been researched and share how three recent meta-analyses (e.g., Botes et al., 2020; Teimouri et al., 2019; Zhang, 2019) show a consistent negative relationship between achievement and language anxiety. Nevertheless, they caution that meta-analytic work can sometimes lose "the individuality beneath all of those data points" (p. 91). In order to not lose the individual, the authors argue for a role for complex dynamic systems theory (CDST) in explaining how language anxiety continuously emerges from interrelated and interacting factors across cognitive, physiological, and social systems. To highlight how this works, they demonstrate how an idiodynamic method can showcase the subjective experience of an individual language learner in real-time by recording an affective variable, like anxiety, while they perform a task. As they note, this approach can better explain whether language anxiety either inhibits or facilitates L2 development than has previously been the case (e.g., Scovel, 1978). Subsequently, MacIntyre and McGillivray outline five propositions on intra-individual differences and language anxiety. First, they argue that people change over time as language develops. Second, they demonstrate how emotions are coordinated and potentially competing processes that change over short timescales. Third, they explain that a fully integrated conceptualization of anxiety blends systems, including cognitive, emotional, cultural, personality, and metacognitive, among others. Fourth, they lay out how the soft assembly of incompatible states can help us understand the process of language learning and anxiety, capturing both generalizations and the exceptions to them. Finally, they argue for the necessity of exceptional cases, which are generally lost to error or removed as outliers, and how such cases can provide a fuller account of language learning processes and language anxiety. MacIntyre and McGillivray conclude their important piece by sharing practical examples of how language teachers may respond to individual language learners who may be experiencing debilitating anxiety.

In "Language anxiety and learner silence in the classroom from a cognitive-behavioral perspective," Kate Maher and Jim King describe how anxious language learners are more likely to negatively appraise communicative situations, which affects their subsequent participation in the language learning classroom environment. As such, anxious language learners' negative appraisals and feared predictions about the social costs of making mistakes in language classrooms may cause even the most motivated and proficient language learners to miss opportunities to develop their L2 through interaction as their anxiety may lead to more silent behavior. In other words, "inhibition and silence arise as a consequence" (p. 108) of the anxious language learners' propensity to direct their attention inwards. In a negative cycle, their silence can act to confirm self-doubt and other negative self-appraisals leading to more silent behavior. From a cognitive-behavioral theory-based approach to understanding language anxiety, they suggest that if learners focus on content-specific factors (e.g., increasing vocabulary knowledge or fixing grammatical errors), the learners are unlikely to develop their L2 most effectively without developing coping strategies that deal with the anxiety of being in and performing in a language classroom. In order to help struggling students, it is necessary that language teachers be aware of how they manage their language classrooms to avoid further activation of anxious language learners' feared predictions, negative assumptions, and thoughts. In addition, they offer practical advice as to how reflective practices and reframing can help break down negative thoughts and identify underlying factors so that language learners may break the negative cycle of language anxiety and build confidence.

While the bulk of second language acquisition (SLA) research investigates language speaking anxiety, in the article "The relationship between reading and listening anxieties in EFL classrooms: Exploring the mediating effect of foreign language classroom anxiety," Gökhan Öztürk provides an empirical exploration into the relationship between language classroom anxiety and lesser-studied language skills (i.e., reading anxiety and listening anxiety). The study includes data from 341 English language learners from four Turkish public universities. The author found moderate levels of all three types of anxiety: *classroom anxiety*, *reading anxiety*, and *listening anxiety*. These moderate to high levels of anxiety corroborate past research into the anxiety of English language learners around the world. The author also found a positive correlation between all three types of anxieties. For example, if a learner's listening anxiety increases, their classroom anxiety will most likely increase as well. In this particular study, the correlation between reading and listening anxiety was the strongest. Using the descriptive findings, Öztürk built and tested a mediation model from which reading anxiety significantly predicted classroom anxiety, while both classroom anxiety and reading anxiety predicted listening anxiety. From the mediation analysis, Öztürk claims that a decrease in the overall level of language classroom anxiety could not only potentially influence the level of the other skill-based anxieties but also lower the strength of the relationship among them.

In their synthesis of research titled, "Second language anxiety: Construct, effects, and sources," Mostafa Papi and Hassan Khajavy provide an overview of how second language anxiety has been the most studied affective factor in the field of second language acquisition. Papi and Khajavy argue that the field can be divided into three main groups. First, there are studies that have tried to conceptualize and operationalize second language anxiety as an overarching entity or by the dimensions that make up the construct. These studies are claimed to help us better understand the language learning experience and how language anxiety feels for the language learner. This line of research attempts to identify what contributes to language anxiety, what the consequences may be, as well as how we might change the language learning experience in order to make a positive impact on the language learner. Second, there are studies that have explored the impact of second language anxiety on a variety of different factors in second language learning, including behavior, motivation, language performance, and language learning. In order to learn a language, the authors importantly note that there is a requirement for most language learners to leave their comfort zone. In this way, language anxiety is expected and has even been argued to have a facilitatory effect in the short term. In the long term, however, it is believed that language anxiety may limit language learning opportunities. Third, there are studies that have attempted to investigate the different sources of second language anxiety. Multiple different factors have been divided into linguistic, learner-internal, and learner-external categories in studies like this. The authors conclude their synthesis by explaining how, in their opinion, research in second language acquisition can usefully move forward.

In the final article "A primer on measurement invariance in L2 anxiety research," Ekaterina Sudina argues that measurement invariance is an essential tool for strengthening the validity behind L2 anxiety measurement instruments. Sudina begins the primer by explaining how few psychometric instruments have been tested for measurement invariance or the extent to which a measuring instrument produces consistent and comparable results across study contexts. In other words, measurement invariance allows for between- and within-group comparisons. Sudina makes a case for why measurement invariance should be more widely practiced, describes the different stages that make up measurement invariance testing with practical tips for scale developers and users, provides exemplars of

the use of measurement invariance in applied linguistics, and makes a final argument for the utility of measurement invariance in future validation studies.

In publishing this issue, the board of the *Annual Review of Applied Linguistics* hopes to encourage the field to think more deeply about the multifaceted ways in which anxiety manifests in language teaching and in second language acquisition and applied linguistics more broadly. While the current cultural moment means that we do not have to look far for examples of traditional conceptions of L2 anxiety (e.g., fear of negative evaluation, negative self-appraisals), the authors in this issue encourage us to widen our perspectives and investigate the other emotions intersecting negative experiences, creating a more complete and complex picture of what it means to experience L2 anxiety. By gathering together such varied pieces addressing L2 anxiety, we hope this volume will facilitate a better understanding of the anxiety of our current age and overcome it, assisting learners with their goals of developing and succeeding in their language journeys.

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