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Emotion and its relation to cognition from Vygotsky's perspective

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Abstract

Vygotsky's sociocultural theory (VST) has been increasingly utilised as an effective framework to account for the role of emotions in learning and development. Yet, within VST, emotion has neither been systemically theorised nor investigated. This paper contributes to the literature by offering a theoretical discussion of Vygotsky's perspective on emotion and its relation to cognition. Employing a content analysis approach, three of Vygotsky's key texts on emotions were closely read and analysed with emerging themes grouped into a system of interrelated theoretical tenets. The insights gained from this paper benefit scholars who are interested in understanding and researching emotions from a VST perspective as well as provide important implications for educational practices.

Keywords Emotion · Cognition · Vygotsky · Sociocultural theory · Cultural-historical theory

Introduction

Emotion is recognised as a pervasive phenomenon linked to our thinking, decisions, behaviours and development. Notwithstanding, the task of defining emotion and drawing its boundaries has proven to be challenging, and has resulted in different perspectives and conclusions. In the field of education, research on emotion has been limited compared to the area of cognition (Sutton & Wheatley, 2003), which is generally concerned with knowledge, beliefs and practices (Borg, 2003, 2015). One of the reasons is that cognition is commonly stereotyped as being associated with rationality and emotion with irrationality or feminist philosophy (Chen, 2021; Fried et al., 2015). While there has been a historical division between cognition and emotion, continued research has increasingly supported an intimate relationship between them (Pessoa, 2008). Understanding emotion and its relation to cognition thus has significant implications for supporting both educators' and learners' well-being and holistic development.

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At the sociocultural turn in education (Cong-Lem, 2022a; Johnson, 2006), Vygotsky's sociocultural theory (VST) has emerged as a prominent theoretical framework to account for the role of sociocultural processes in human psychological development. Recently, as research on emotion has developed into an important area of knowledge (Al-Hoorie, 2017), VST is contended as having the potential to transcend the historical division between cognition and emotion (Lantolf & Swain, 2019; Swain, 2013). This is demonstrated with increasing research drawing on VST, especially its concept of perezhivanie (commonly translated as emotional experiences), to account for the role of affect in learning, teaching and professional development (e.g. Dang, 2013; Feryok, 2020; Lantolf & Swain, 2019; Swain, 2013; Yang & Markauskaite, 2021).

Although VST offers a holistic framework that takes into consideration the role of affect in education, emotion per se has neither been examined nor theorised systemically within the theory (González Rey, 2016; Smagorinsky, 2011). Mesquita (2012) maintains that "[i]n his [Vygotsky's] work, there is not an explicitly and systematically organized theory of emotions, yet it is believed there is a consistent theoretical legacy for understanding psychological phenomena" (p. 809). Deepening our understanding of emotions from the VST approach can in turn support the current appropriation of the theory in educational research. As previous scholars have pointed out, some of Vygotsky readings have been differentially and inadequately interpreted (Gillen, 2000; Smagorinsky, 2018). Given the prominent role of VST in informing educational theories and practices, "[t]he dominance of deficient editions of his [Vygotsky's] writings has had regrettable consequences" (Gillen, 2000, p. 183). It is thus essential for further systemic analysis of Vygotsky's works or texts to generate a more granular understanding of the phenomenon.

An approach promulgated to refine our understanding of VST is to conduct a close analysis of Vygotsky's texts, in this case, his works on emotions. As Veresov (2019) contends, "dealing with Vygotsky's legacy, especially with English translations, we should always undertake a sort of small textual investigation" (p. 63). Van der Veer and Yasnitsky (2011) further contend "[i]t is only on the basis of an accurate corpus of all of his publications that we can arrive at an adequate assessment and subsequent elaboration or criticism of Vygotsky's work" (p. 475). A close reading or content analysis of his texts drawing on multiple instances allows for consistently emerged conceptual themes, more reliably representative of Vygotsky's view on the topic under investigation. Such systemic analysis of Vygotsky's texts is particularly important given the proliferation of theoretical publications on Vygotsky's ideas in recent years. It is argued that a more explicit methodological approach to analysing and interpreting Vygotsky's texts can enhance the integrity and reliability of theoretical arguments scholars put forward on his behalf.

In response to the gaps discussed above, this paper aims to provide a more comprehensive synthesis of Vygotsky's view on emotion and its relation to cognition, which are two contemporary concerns in the educational literature. This is achieved by conducting a content analysis of Vygotsky's key texts on emotions. In the next section, a brief overview of previous literature utilising VST to examine emotion is discussed.

A brief overview of previous literature on Vygotsky's contribution to understanding emotions

The potential contribution of Vygotsky's perspective on emotions has been increasingly recognised and embraced in the literature. However, previous researchers tend to either focus on specific concepts and works of Vygotsky to understand his view of emotions or apply these concepts for domain-specific empirical research. As for the former trend, perezhivanie has been increasingly capitalised on to extrapolate emotion from a cultural-historical perspective (e.g. Fleer & Hammer, 2013b; Mahn & John-Steiner, 2002). For instance, the concept has been adopted to study teachers' professional learning (e.g. Dang, 2013; Golombek & Doran, 2014) and children's emotional regulation (e.g. Fleer & Hammer, 2013a, b). In addition, exploring Vygotsky's perspective on emotion was also accomplished by examining his work *The Psychology of Art* (e.g. Smagorinsky, 2011), a publication drawing on Vygotsky's doctoral thesis, or *Thinking and Speech* (e.g. Mahn & John-Steiner, 2002; Mesquita, 2012).

Although previous literature has shed light on the potential of Vygotsky's theory to contribute to understanding emotion, previous studies tend to draw on his concepts for practical educational research purposes as discussed above rather than theorise emotion from VST perspective. In addition, understanding emotion by merely drawing on the single concept of perezhivanie is insufficient because, in addition to emotion, perezhivanie also involves, at least equally important, cognition (Michell, 2016; Veresov, 2017). Previous scholars have also frequently examined emotion together with other phenomena (e.g. subjectivity, the essence of arts) (e.g. González Rey, 2016; Larrain & Haye, 2020; Smagorinsky, 2011) rather than have focused on emotion as the targeted phenomenon, which makes available VST insights into emotions still relatively limited and fragmented.

To the author's knowledge, very few papers have thus far been dedicated to solely exploring Vygotsky's perspective on emotion except for Sawaia (2000), Magiolino (2010) and Mesquita (2012). According to Sawaia (2000), emotion is "not as a theory systematically formulated" in VST but is "diluted across Vygotskian work" where "Vygotsky gives to emotion a character similar to cognitive processes" (as cited in Mesquita, 2012, p. 810). Magiolino (2010) also explores Vygotsky's elaborations on emotions and argues that Vygotsky discusses the formation and development of emotions as being enabled via semiotic processes in the individual and social history. In the same vein, Mesquita (2012) examines the relevance of Vygotsky's theory to the understanding of emotions and highlights that VST is still relevant and has the potential for generating new knowledge of emotions for contemporary scholars. However, Mesquita mainly draws a parallel between Vygotsky's theorisation of semiotic mediation in psychological development and contemporary understandings of emotion rather than conducting a true analysis of Vygotsky's texts on emotions. As the author indicates, the article aims to "propose a way of understanding emotions based on the historical-cultural approach, starting from a plausible analogy with Vygotsky's ideas on thinking and language" (Mesquita, 2012, p. 809). Thus, there is still a need for a systemic effort to unpack in detail the nature, characteristics and development of emotions as theorised within VST.

In summary, the brief review of the literature above stipulates the need to further synthesise Vygotsky's perspective on emotions, particularly through close reading and analysis of his primary works (Van der Veer & Yasnitsky, 2011; Veresov, 2017). The current study was conducted to bridge this gap.

Methodology

Materials

The first methodological step is to determine Vygotsky's key texts on emotions. Such texts should help clarify how he conceptualises emotion and its characteristics. However, it is acknowledged that Vygotsky's discussion of emotions is rather limited and scattered in his works. At the recommendations of previous scholars (e.g. Clarà, 2015; González Rey, 2016; Mahn & John-Steiner, 2002; Swain, 2013; Veresov, 2019), three widely cited book chapter publications considered to be important texts of Vygotsky on emotions were selected to be included in the subsequent analysis:

- "Lecturer 4: Emotion and Their Development in Childhood" (Vygotsky, 1987)
- "The Crisis At Age Seven" (Vygotsky, 1998)
- "The Problem of Environment" (Vygotsky, 1994).

In addition to the above chapters, another round of searching was performed within the six volumes of Vygotsky's works, conceivably the most comprehensive collection of his works published in English (Gillen, 2000). These texts were first loaded into NVivo software Mac version 1.6.2. Subsequently, the text query function in NVivo was utilised where the term "emotion" was entered into the text search box with the option of including stemmed words of emotion (e.g. "emotional"). The results confirmed that the selected texts above indeed contained a higher coverage of the term "emotion" than other chapters in the six volumes. As such, these texts were ultimately selected for further analysis.

Data analysis

A content analysis approach (Hsieh & Shannon, 2005; Merriam & Tisdell, 2016) was adopted to analyse the selected texts of Vygotsky with the support of NVivo. A heuristic scheme of analysis was developed to support the analysis of Vygotsky's view on emotions:

a) If a theory or an aspect of it is criticised by Vygotsky, it is not considered representative of his view.
b) If a theory or a tenet of it is supported by Vygotsky, it is then considered part of his view.

The analytical process was performed inductively and recursively, featuring three major steps. First, the author read through the texts to have an overall impression and interpretation where relevant segments of information were coded into preliminary codes. Second, the texts were revisited back and forth to refine the existing categories, generating new categories as well as re-arranging them (hierarchically) as new insights emerged. Also, the coded categories were regularly re-examined and grouped into broader, more abstract themes depending on their interrelations. Finally, clusters of these themes were ultimately selected for our final report. Albeit presented linearly, the process of interpretation and analysis occurred in a dynamic and iterative manner.

Findings

This section reports on the emerging themes as the result of the content analysis of Vygotsky's texts on emotion. In order to provide a more systemic understanding of emotion from the VST perspective, the themes are further organised into three overarching categories, namely the bases of emotions, their conceptualisation and characteristics and the impact of emotions on psychological and personality development.

Evolutionary, Neurophysiological and Sociocultural Bases of Emotions

VST provides a holistic view of emotion, examining it from evolutionary, neurophysiological and cultural-historical bases. Vygotsky is critical of the view of emotions as evolutionary remnants while highlighting the fact that the emotional and psychological processes are constructed on the same cerebral mechanism. He further contends that human emotions are qualitatively different from that of animals for they have undergone a unique historical sociocultural development.

Evolutionary basis: emotions not as evolutionary remnants

Starting his lecture, Vygotsky notes that research on emotions "stood out like a white raven from other domains" (Vygotsky, 1987, p. 325), which suggests the complexity of emotion and the status of the contemporary research on the phenomenon. He observes that most theories on emotion have been developed from the naturalistic inquiry, initiated by Charles Darwin where emotions are considered remnants of animal origins and the evolutionary process. Vygotsky is discontent with this idea, claiming it is an "introspective" account of human emotions: "The weakness of Darwin's theory is that he was unable to explain the progressive development of the emotions" (Vygotsky, 1987, p. 332). Moreover, accounting for emotions from an evolutionary perspective — i.e. emotions as biological adaptations — is inadequate for it fails to explain why emotional disturbances can negatively impact human psychological development (Vygotsky, 1987).

Neurophysiological basis: emotions as an integral part of the cerebral mechanism

Another tenet is concerned with whether the constructing mechanism of emotion is subordinate to that of our psychological functions. Vygotsky observes that previous theories all put forward the same premise that emotion is inherent and integral to the brain's functioning. According to Vygotsky (1987), "the actual substratum of the emotional processes is not the biologically ancient internal organs, not the extracerebral mechanisms that led to the concept that the emotions are a separate state, but *a cerebral mechanism* [emphasis added]" (p. 332). Accordingly, emotions are constructed on the same basis as of normal psychological functions. They depend "on the same organ that controls all other reactions associated with the human mind" (Vygotsky, 1987, p. 322), a conclusion also established in modern neuropsychological research (see Pessoa, 2008).

Sociocultural basis: emotions as developmental sociocultural processes

Vygotsky concurs with Cannon that only the instinctive component of emotion dies away as an outcome of human development but not everything about emotions. In other words,

instinct is only part of what constitutes human emotions. In particular, human emotions cannot be explained in terms of organic functioning or as similar to the emotions of animals, for they "are isolated from the instinctive domain and transferred to an entirely new plane" (Vygotsky, 1987, p. 322), i.e. the sociocultural plane with its historical development.

Refuting the notion that human emotions are purely biological in nature, Vygotsky stipulates the need to understand and examine emotions as developmental sociocultural processes. This is because emotions are shaped and developed as individuals engage in sociocultural processes. This premise on emotion is reflected in the works of Freud who postulates that emotions as neurotic states progress over time as the individual grows up. The emotions that are "characteristic of the young child are different from those of the adult", for it is within the living context of the person that "the emotional processes acquire their meaning and sense" (Vygotsky, 1987, p. 333). In a sense, children and adults engage in different (age relevant) activities and environments and accordingly, emotions have differential meanings and roles for them.

Conceptualisation and characteristics

While Vygotsky did not provide his definition of emotion, he critiques the view of emotions merely as physiological states. Drawing on previous experimental findings of other psychologists, he establishes that emotions are complex, dynamic and transitional in nature and once unfinished, they can continue to exist in a covert form or be transformed into another emotion. Finally, Vygotsky differentiates between emotions and feelings where the former is postulated as beneficial and the latter detrimental to the individual's physiological and psychological functioning.

Physiological states as companions to emotions

Vygotsky also opposes understanding emotions as products of organic movements, which can be found in the works of Lange and James, also known as the James-Lange theory. For these scholars, emotions are reflections of our physiological states (i.e. not as the result of our perception of an event as conventionally understood). The James-Lange theory advocates "the idea that human emotions have biological origins in the affective and instinctive reactions of animals", and as such, emotions are regulated, weakened and suppressed by organic expressions and dynamics (Vygotsky, 1987, p. 326). According to this view, emotion can be controlled by suppressing its external bodily manifestations, a thesis that has later been refuted with experimental findings. Vygotsky criticises this approach as a step backward from Darwinian tradition for it "stripped emotions from consciousness", excluding "any potential for imagining the genesis of human emotions" (Vygotsky, 1987, p. 328).

The James-Lange theory also promotes the dualism of higher and lower emotions as discrete types distinct from each other. However, Cannon's experimental findings have refuted this notion, demonstrating that physical manifestations of emotions are universal. Also, it has been found that bodily physiological responses can be similar even when humans experience psychologically different emotions, for example, rage, fear and anger. Vygotsky (1987) contends that "[w]e find identical physical changes associated with what are, psychologically, very different emotions" (p. 329).

The above arguments and evidence lead to Vygotsky's thesis that *physiological states are companions to emotions rather than emotions per se*. This is because the bodily responses considered features of an emotion can be elicited when the subject engages in

intense physical movements. For instance, in Cannon's experiment, when a cat was forced to run at a maximum speed, the elicited physiological changes resembled that of intense emotions. In other words, there is no simple direct relationship between our physiological reactions and internal emotions for the former are "merely the companions of the emotions" (Vygotsky, 1987, p. 331).

Complex, dynamic and transitional nature of emotions

In line with Buhler[1], Vygotsky concurs that emotions are neither static nor settled. Instead, they are nomadic and transitional. Buhler theorises a three-stage development for human behaviours where emotions serve as the motivating force. In the first stage, known as *Endlust*, it is the pleasure emotion expected at the end of the action that motivates the individual's behaviour, characteristic of instinctive behaviours. In the second stage, *Funktionslust*, the experience of pleasure is generated during the process of engaging in the activity. This stage can be exemplified in a situation where a child eats not only to quench his hunger but also to enjoy the process of eating per se. In the third stage, *Vorlust*, the pleasure experience here is shifted to the beginning of the activity or the expectation of it rather than performing and accomplishing it. An example of this stage is when the situation where at the beginning of the task, a child already experiences pleasure in searching for the answer.

However, for Vygotsky, although Buhler's theorisation above is valuable in demonstrating the transitional nature of emotions, it is simplistic and insufficient to account for real-life emotions, which are more complex and influential on the person's psyche. He discusses:

> My own data convince me that the shift of pleasure from the result of the action to its anticipation is but a pale expression of *the diverse range of potential shifts* [emphasis added] in emotional life, shifts that constitute the actual content of the development of the child's emotional life (Vygotsky, 1987, p. 334).

There are two conclusions conceivable from the statement. First, the developmental shifts of emotions are more complex, diverse and dynamic than being a linear movement from the end of the activity to the beginning as postulated by Buhler. Second, these emotional shifts may index qualitative changes in the individuals' emotional lives. In other words, when a person experiences changes in their emotional life, it suggests the presence of new psychological progress.

Vygotsky (1998) discusses how a child at the age of seven starts to acquire the meaning of his affective experiences: "Experiences acquire meaning (an angry child understands that he is angry), and because of this, the child develops new relations to himself that were impossible before the generalization of experiences" (p. 291). The age of seven is commonly considered the crisis period where the child undergoes newly formed emotional experiences and shifts. However, these emotional developments are not all retained with the child. According to Vygotsky (1998), "[n]eoformations such as self-love and self-evaluation remain, but the symptoms of the crisis (affectation, posing) are *transitional* [emphasis added]" (p. 292). This again indicates the temporality of emotions yet with an indication of psychological development.

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[1] Karl Bühler (1979–1963) is a German psychologist and linguist.

Vygotsky praises Lewin who successfully demonstrated in his experiments "how one emotional state is transformed into another, how one emotional experience is substituted for another, and how an unresolved and uncompleted emotion may continue to exist in covert form" (Vygotsky, 1987, p. 336). It is thus essential to recognise the dynamic, recursive and persisting nature of emotions, especially when "unresolved and uncompleted" (Vygotsky, 1987, p. 336). Vygotsky, however, did not elaborate further on what types of experiments Lewin conducted to achieve these findings.

Qualitatively different emotions

Emotions can be qualitatively differential in nature. Vygotsky emphasises the value of Claparede's finding that points out how emotions and feelings are different from each other. While the former is biologically or evolutionarily useful, the latter is postulated as having a detrimental effect and emerges in situations where the former cannot be adequately expressed. Claparede[2] utilised a frightened rabbit to illustrate this point. The rabbit was frightened (i.e. emotions) and started to run, yet the feeling of fear started to disturb its running, for which the animal failed to save itself. In this example, only the initial emotional reaction of the rabbit is considered an emotion, whereas the fear that follows is a feeling that hurts its running capacity.

Vygotsky (1987) believes this differentiation (between emotions and feelings) has "tremendous significance because the old psychology mechanically confused these aspects of emotions and feelings, ascribing both to processes that do not exist" (p. 335). The focus here is not on "the classification of the emotions but on the nature", on "the close connections he [Claparede] has identified between the emotions and other processes of spiritual life and on his view of the diversity of the emotions themselves" (Vygotsky, 1987, p. 335). Emotions exist in various forms and possess qualitatively different characteristics, which can enhance or impede mental functions, such as emotions in artistic experiences or those accompanying neurotic symptoms (Vygotsky, 1987).

Impact of emotions on psychological and personality development

From VST, an individual's emotional life significantly impacts on psychological and personality development. Vygotsky additionally extrapolates this matter by revealing the psychological consequences when the normal structural relationship between cognition and emotion is altered, which leads to pathological cases. While discussing the impact of emotions, Vygotsky underscores the dominant role of cognition (i.e. intellectual thinking) in generating and moderating emotions.

Emotion as contributing to psychological development

Contrary to the view that emotions are subordinate mental processes, Vygotsky views them as contributing to a person's psychological development. His view is particularly informed by the works of Adler who establishes the constituting role of emotions in forming a person's general view of life: "[t]he structure of the individual's character is reflected in his emotional life and his character is defined by these emotional experiences" (Vygotsky,

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[2] Edouard Claparede (1873–1940) is a Swiss functional psychologist.

1987, p. 333). Accordingly, it is important to recognise emotions as a contributing factor to the development of one's personality, which in turn stipulates the need to examine the emotional life of a person (in addition to other cognitive aspects) to extrapolate their mental growth.

The influential role of emotions in the development of developing human psyche is also discussed in Vygotsky's theorisation of perezhivanie, commonly translated as emotional experience. Vygotsky (1994) maintains that "the essential factors which explain the influence of environment on the psychological development of children, and on the development of their conscious personalities, are made up of their emotional experiences [perezhivanija]" (p. 339). Perezhivanie is postulated as the intrapsychological prism that refracts the external influence of the environment on the evolution of the individual's psyche (Vygotsky, 1994).

The structural relationship between emotion and cognition

Toward the end of his lecture, Vygotsky discusses another important topic: the structural relationship between emotion and cognition. Cognition here refers to intellectual thinking or culturally developed forms of thinking. Vygotsky illustrates his arguments by comparing the cognitive-emotional relation between realistic/normal thinking and pathological thinking. He postulates that once an individual's emotional life is somehow disturbed, "a unique system of relationships between thinking and the emotions" emerges, resulting in pathological mental illnesses (Vygotsky, 1987, p. 337). For instance, a patient with schizophrenia can still react emotionally but in fact, undergo a disturbance in their consciousness (Vygotsky, 1987).

The essence of the relationship between cognition and emotion is further discussed in light of the comparison between realistic and autistic thinking:

> There is a certain synthesis of intellectual and emotional processes in both autistic and realistic thinking. In realistic thinking, however, the emotional process plays a supporting and subordinate role rather than a leading role. In autistic thinking, the emotional process takes the leading role. The intellectual process assumes the supporting role. (Vygotsky, 1987, p. 337)

Three important conclusions can be conceived from Vygotsky's statement above. First, cognition and emotion are inherently connected regardless of the types of thinking (i.e. "a certain synthesis of intellectual and emotional processes in both autistic and realistic thinking"). Second, in normal/realistic/intellectual thinking, emotion plays the role of a subordinate process, whereas the reverse is true in autistic/pathological thinking — i.e. thinking trails behind emotions. The structural disorder in the relationship between cognition and emotion results in severe mental consequences. Vygotsky (1987) affirms that "[w]hat is disordered in this system is not the intellectual or emotional processes themselves, but their relationship" (p. 337).

For Vygotsky, recognising that thinking is also influenced by emotion is essential but insufficient. Scholars need to address the relationship further by examining the mediating role of social signs.

> Admitting that thought depends on the affection is not much to do, we need to go further, go from metaphysical study to the historical study of phenomena: it is necessary to examine the relationship between intellect and affection, and the relationship

of these with the social signs, and avoiding reductionism dualisms. (Vygotsky, 1934, p. 121, cited in Mesquita, 2012)

Vygotsky stresses that the reductionist view of cognition and emotion can be overcome by exploring their interrelationships with each other and with social signs. Yet, how this premise can be realised in empirical research is still open for further discussion and research.

It is also postulated that cognition regulates emotion. Vygotsky concurs with Lewin that "[t]he emotional reaction is the unique result of a particular structure of mental processes" (Vygotsky, 1987, p. 336). This statement is supported by experimental findings where the emotions characteristic of physical sporting activities can be elicited by performing mental activities (e.g. playing chess in the experiment). Also, while events may elicit different emotions yet "the structural position of the emotional processes in the whole remains the same" (Vygotsky, 1987, p. 336). Otherwise said, the functioning of emotional processes is structural and psychological in nature and can be examined as such.

The dominant role of cognition has also been discussed when Vygotsky theorises the concept of perezhivanie. Vygotsky (1994) posits that a child's perezhivanie or emotional experience in a situation is determined by "how a child becomes aware of, interprets, [and] emotionally relates to a certain event" (p. 341). How individuals emotionally experience and are influenced by an event is thus subject to their cognition, the way they understand, interpret and generalise its significance (Vygotsky, 1994).

Discussion

The development of the current paper is a response to a lack of a more comprehensive discussion of Vygotsky's perspective on emotion. As acknowledged by previous scholars, his insights on emotions though more than 90 years old are still innovative and relevant to today's research and training (Mesquita, 2012). This section further discusses implications for educational and research practices.

Implications for educational practices

Conceptualisation of emotion

The discussion of Vygotsky's perspective on emotion in this paper provides a more refined understanding of the phenomenon from a cultural-historical perspective. Indeed, within VST, emotion is a biopsychosocial phenomenon. First, emotions undoubtedly involve intuitive biological processes. Vygotsky (1998) contends that "[e]xperience has biosocial orientation" (p. 294). However, while Vygotsky acknowledges emotions as partly instinctive, he postulates that emotions are more complex and that physiological states are merely companions of emotions. Second, emotions are psychological for they are constructed on a similar cerebral basis as mental functions and as such, they closely interact with the latter. Next, as for the sociocultural dimension, Vygotsky asserts that human emotions are distinct from that of animals for they have been transferred to a different plane of development, the sociocultural plane of consciousness with its historical development. Accordingly, the examination of emotions must involve the investigation into the cultural or intellectual development of the concerned individuals. In general, this conceptualisation of emotion

from the VST perspective is in line with conclusions from modern research (see also Lumley et al., 2011; Perry & Calkins, 2018). The understanding of emotions as a biopsychosocial phenomenon has important implications for educational activities and emotion research, which are discussed in the following subsections.

Relationship between emotional and intellectual development

The inherent relation between emotion and cognition has two specific implications for educational practices. First, it is essential to attend to emotional in addition to intellectual needs. For Vygotsky, emotions play a role in forming the motivation of an individual's activity. This notion though not extensively discussed in this paper can be found in Vygotsky's theorisation of play (Vygotsky, 1967/2016). Within VST, play is an important concept and practice that has the potential of fulfilling both the affective and intellectual needs of the participants. Indeed, Vygotsky is critical of the view that play merely serves as a means for intellectual development.

> [I]t seems to me that to refuse to approach the problem of play from the standpoint of fulfilment of *the child's needs, his incentives to act, and his affective aspirations* [emphasis added] would result in a terrible intellectualization of play. (Vygotsky, 1967/2016, p. 6)

Accordingly, play is a meaningful concept and practice that should be explored and capitalised on in educational activities drawing on the VST framework.

Given the interrelation between cognition and emotion, it is recommended that educators and learners be equipped with essential knowledge and the relevant skills to handle their emotions effectively and constructively. Indeed, previous literature has established the role of emotion management skills in better academic achievements and well-being (e.g. MacCann et al., 2020; Perera & DiGiacomo, 2013). For instance, a large-scale meta-analysis by MacCann et al. (2020) with the involvement of 42529 participants found a significant relationship between emotional intelligence (i.e. generally understood as the capacity to regulate and utilise emotions) and academic achievement and that self-rated emotional intelligence was a better predictor of grades than standardised tests. The next subsection discusses mindfulness as another approach to emotion regulation and the contribution of Vygotsky's perspective on emotion to explaining the underlying mechanism.

Emotional regulation through mindfulness

Vygotsky's perspective on emotion also sheds light on the potential psychological mechanism underpinning how mindfulness can support emotional regulation. While mindfulness and similar social-emotional programs are increasingly advocated in educational and training activities, the underlying explanatory mechanism for the effect of these programs still requires further explanation. Indeed, in the seminal paper on mindfulness by Shapiro et al. (2006), the authors highlight the need "to investigate questions concerning mechanisms of action underlying mindfulness-based interventions" and "to elucidate potential mechanisms to explain how mindfulness affects positive change" (p. 373). Generally, mindfulness refers to one's conscious awareness of moment-to-moment bodily sensations, thoughts and emotions, particularly in a nurturing, non-judgemental way (Bishop et al., 2004; Creswell, 2017). Mindfulness of emotions is to be aware of the arising and manifestation/experience

of one's emotions, which resonates with the *generalisation* of emotions as Vygotsky discusses.

For Vygotsky, the capacity to generalise emotions is of great importance for the individual's development because it allows the individual to establish a new relation to their own experiences and structurally change their perceived environment. Such an ability is not readily available to the child in early childhood. Rather, it is a product of their cultural/intellectual development. According to Vygotsky (1998), "[i]n early childhood, the child does not know his own experiences" (Vygotsky, 1998, p. 291). However, as the child grows up, particularly at the age of seven, "[e]xperiences acquire meaning (an angry child understands that he is angry), and because of this, the child develops new relations to himself that were *impossible before the generalization of experiences* [emphasis added]" (p. 291). In this case, emotion no longer exists in the subconsciousness but it is brought to the forefront on the plane of consciousness where it is recognised and contemplated for possible transformation. Accordingly, Vygotsky's notion of generalisation of emotional experiences can contribute to the extrapolation of how meta-consciousness of emotions can promote better regulation of emotion and other mental qualities.

Implications for research

Approaches to studying emotions

The insights into emotions from VST stipulate the need to take a developmental approach to the study of emotions. As discussed above, emotions are not static but nomadic and can be hidden from our consciousness. Findings in Lewin's experiments have illustrated "how one emotional state is transformed into another, how one emotional experience is substituted for another, and how an unresolved and uncompleted emotion may continue to exist in covert form" (Vygotsky, 1987, p. 336). This indicates the complexity of emotions and the need to study them historically drawing on a VST methodological framework.

Next, from Vygotsky's perspective, emotions are subjective and situated according to the specific personal characteristics mobilised in that situation, and thus they should be investigated within and across individuals. This notion is particularly advocated in Vygotsky's theorisation of the concept of perezhivanie. According to Vygotsky (1994), the same event may mobilise different personal characteristics across individuals, thus causing differential perezhivanija[3] (emotional experiences). Even within an individual, different events provoke differential personal characteristics and emotional reactions. In investigating these emotional experiences, Vygotsky (2020) maintains that "it is not important to know [all of] the constitutional features of the child in themselves; rather, to us it is important to know *which of these constitutional features* [emphasis added] plays the decisive role in defining the child's attitude to a given situation" (p. 72). Accordingly, determining the key characteristics of the individuals that are mobilised in the situation in question is a crucial task for researchers investigating emotions.

Vygotsky's postulation on qualitatively different emotions stipulates the need for researchers to take into account the type of emotion in question, for example, whether is a feeling rather than an emotion because they have different effects on the individual's functioning (see the "Qualitatively different emotions" section). This is a particularly important

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[3] Plural form of perezhivanie

requirement in researching emotions from Vygotsky's perspective or in critiquing his view on emotion (cf. Smagorinsky, 2021).

Emotional incidents in educational research

The role of critical emotional incidents should be further explored and utilised in educational research. According to VST perspective, emotional shifts may indicate cognitive changes (Vygotsky, 1987) and psychological development is made of perezhivanija (Vygotsky, 1994). Intense emotional incidents thus can be a fruitful site to explore change and development in an individual's cognition. Indeed, this premise has been exploited in prior educational research (e.g. Golombek, 2015; Golombek & Doran, 2014). Golombek and Doran (2014) studied the role of emotions in the professional learning of English as a Second Language (ESL) student teachers by analysing reflective journals. They concluded that "[e]motional content indexes dissonance between the ideal and reality, offering potential growth points" (p. 102). By the same token, drawing on the concept of perezhivanie, Yang and Markauskaite (2021) explored student teachers' dramatic emotional events as a developmental force for their epistemic agency.

Reading and interpreting Vygotsky's texts

Finally, this paper also contributes to the discussion of how VST can be studied and interpreted more effectively. Given the influential impact of the theory in guiding educational practices and research, a more stringent analysis of Vygotsky's texts is needed (Van der Veer & Yasnitsky, 2011). In line with Veresov (2019) and Van der Veer and Yasnitsky (2011), this paper indicates that scholars can generate themes that are more accurately representative of Vygotsky's ideologies by performing a close reading and content analysis of Vygotsky's selected texts on a given topic. At the same time, this paper calls for a more transparent and systematic methodology to be adopted by contemporary scholars in their efforts to interpret and advance Vygotsky's legacy. Theoretical discussions of Vygotsky's works are, however, insufficient as a replacement for real empirical research employing his *genetic-experimental* methodology (Fleer & Veresov, 2018; Veresov, 2010) to advance his theory given the *structural-systemic* epistemology of VST (Cong-Lem, 2022b; Toomela, 2015).

Conclusion

The discussion of emotions from a Vygotskian perspective in this paper is not without limitation. First, the lack of details on the experiments described in Vygotsky's text makes it challenging to assess the validity and reliability of their findings. Also, emotion is neither extensively theorised nor investigated in VST (Mesquita, 2012; Smagorinsky, 2021) and his perspective established in this paper drew mainly on his key texts on emotions. In addition, since Vygotsky's discussion of emotions is more than 90 years old, some information presented in this paper may be of limited novelty to today's emotion psychology and thus it would be more beneficial for consumers of this study to also seek further insights on emotion from contemporary research. Although somewhat hindered by these limitations, Vygotsky's insights on emotions are still relevant and valuable for a more holistic understanding of emotion, a pervasive yet complex phenomenon that remains unsatisfactorily explained until today. Potential implications for research and practices are certainly

not limited to those presented in this paper and educators/scholars should contextualise the theoretical tenets conceived in this paper to suit their practices.

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Declarations

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Current themes of research:

Cultural-historical psychology. Teacher professional development. Second/foreign language acquisition.

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