Creativity in the Twenty First Century

Ai-Girl Tan
Christoph Perleth *Editors*

Creativity, Culture, and Development

Springer

Creativity in the Twenty First Century

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"Creativity in the Twenty-First Century Book Series" repositions "creativity" as a boundary-crossing discipline that is essential to learning and teaching, social-economic dialogues, academic discourses and cultural practices, as well as technological and digital communications. The series serves as a timely platform, bringing together like-minded scientists and researchers around the world to share their diverse perspectives on creativity and to engage in open and productive inquiries into promoting creativity for a more peaceful and harmonious world. Researchers and practitioners from all continents are invited to share their discipline-specific insights, research orientations and cultural practices, as well as to pose new questions on what creativity is, how to promote it, which directions to pursue, who should participate, and so on.

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This volume is dedicated to W. Stern (1871–1938) *and Anna Craft* (1961–2014) *for their excellent contributions to developing human creativity*

Foreword I

Once Jean Piaget (1896–1980) was asked to say why he neglected the topic of creativity, which was an emergent research issue in that period. He claimed that creativity was just an "American question" in which he was not interested, because in that field, investigators failed to give reasons of the core problems of mental development, which instead he aimed to address. According to Piaget, development is, in a certain sense, always "creative," since children's thinking changes continuously by transforming preexisting mental schemata into new ones in order to face the problems rising from the environment (see, e.g., Piaget 1962). Thus, it seems that, in Piaget's view, the title of a Shakespearian play could be associated to the topic of creativity: "Much ado about nothing."

It is true, as it has been often acknowledged, that the first impulse to investigate creativity through a scientific approach came from North American researchers (see e.g., Guilford 1950), who also drew the conceptual coordinates underlying the subsequent attempts to assess and improve creative skills and personality traits. So, the "American question" became a "Western question" since also most European investigators shared the same assumptions underpinning the original concept of creativity. Also nowadays in experimental studies about creative processes, the definitions of creativity and the instruments which are applied to measure it and the tools which are devised to improve it are based on that concept. It is worth noting, for example, that in one of the most advanced research field about creativity—that is, the investigation of the neurobiological correlates of the creative act—the traditional tests devised by Joy Guilford (1897–1987) and Ellis Torrance (1915–2003) are still employed.

Can theorizing and investigating about creativity become a "global question"? Yes, if some emerging challenges are seriously taken into account. The classical views of creativity are focussed on individual characteristics and on the "inner work" of the mind. In this perspective, indeed, radical new theories failed to emerge

in the last decades. It seems rather that the novel frameworks which have been presented in recent years are refinements, variations, or integration of previous theories and that no revolutionary paradigm has been proposed. May be that innovation in the conceptualization of creativity can be prompted by starting from very different assumptions as the traditional ones. For instance, in some non-Western cultures what we connect to creativity, even though in those contexts the term "creativity" does not exist or has different meanings and connotations, is linked to the environment—or to the system of relations between the individual and the environment, intended both as physical/technological and social—and to body experiences. Definitions and concepts concerning creativity might be revitalized if broader perspectives, encompassing also the interaction with the environment and the embodied nature of cognition and affects, will be developed.

As far as the assessment of creativity is concerned, it is a widespread feeling that the well-established ways to measure divergent thinking and personality dimensions are inadequate. However, it is not easy to find alternative procedures which are reliable and viable. Also in this case, a contamination of insights coming from different cultures and the criteria of validity based on a long-lasting history of improvements of scientific standards might be beneficial.

Lastly, quite early, in the investigation of creativity, the acquired knowledge about the mental mechanisms involved in the generation of new ideas and artifacts was applied in order to devise tools and training programs aimed at enhancing the creative potential of persons and groups. Most of these techniques failed to reach their goals since their alleged efficacy was not supported by empirical evidence. Moreover, they need, in order to be implemented properly, some conditions (commitment, time, financial resources, and so on) which are not available in current instructional or work settings. Different approaches appear to be needed. It is so understandable why methods grounded on very different backgrounds, apparently "exotic," are successful, at least at the level of the enthusiasm which they can elicit in the trainees. This is another field in which the hybridization of suggestions coming from endeavors outside the traditional training frameworks and the common ways to conceive creative education might be productive.

Research about creativity is faced to a series of challenges, which concern theories, assessment procedures, and training programs. The present book may be meant as an attempt to address such challenges. It is remarkable since it tries to raise crucial questions about both some fundaments of the conceptualization and investigation of creativity and the practices which have been developed to foster it. The volume is intriguing because of the intention to prompt the cross-fertilization of different traditions of research. It is insightful since it encourages to be flexible in thinking about what creativity is and how it can be cultivated. For these reasons, at the end the reader should be convinced that creativity is no more only an "American question."

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Foreword II

Sea of Learning

Upon the face of the deep,

The Sea of Learning knows

No bounds. No shore in sight,

To return to land.

We drift on, lost

In her bosom—only

To be awakened, to taste

The Creative Spirit that moves

Upon the face of the waters.

To write a foreword for the present volume is as much an honor as a challenge: honor, because the editors have invited me to be counted among knowledgeable contributors to their volume; challenge, because the title of the volume is rather intimidating. Creativity, culture, and development are three encompassing domains of knowledge, each of which demands volumes to cover. Imagine the challenge that the editors face in bringing together these three domains in a single volume. They conclude that "creativity, culture, and development represent a unified triad." But what does this unified triad entail? The present volume is devoted to answering this question.

By development, the editors mean "human development." This, of course, delimits the scope of the volume immensely and renders my task of writing the foreword less intimidating. However, this delimitation raises an issue: As noted by the editors, "cultural systems themselves develop as well"; thus, the concept of development applies also to culture. The implication is that human beings are both the products and the creators of culture. In line with Bandura's (1978) concept of reciprocal determinism, the relation between individual behavior and culture is best

conceived as one of the continual interactions. There is no intrinsic reason why culture has to be treated as the cause, and individual behavior as the effect. If culture is defined as that part of environment created by human beings, then we create environments that, in turn, make us human. Creativity plays a key role in this process of continual interaction.

The concept of development should encompass socioeconomic aspects as well. Economic viability in the twenty-first century depends on knowledge as a human resource. Nations that invest in this resource will thrive; nations that fail to do so imperil their own survival. Thus, reforming education is a key for moving ahead in international economic competition; it is essential for national transformations toward a knowledge economy. In Singapore, for instance, the need for educational reform in response to economy-driven imperatives is explicitly and repeatedly articulated. In particular, impressive is the commitment to back policy with massive investment of resources (e.g., treating student teachers as employees of the Ministry of Education, thus enabling them to receive remuneration starting from the beginning of training). Common to calls for education reform in Confucian heritage cultures is the stress on promoting creativity dictated by economic imperatives. Demanded in the new knowledge-based economy are not just the acquisition, but the generation and innovative application of knowledge.

The path to creativity, however, is laden with difficulties and contradictions (Ho et al. 2013). Four of these deserve special attention. In the first place, we note an inherent paradox: A knowledge-based economy requires creativity and ingenuity; it is also driven by avarice that threatens to destroy civil society, social bonds, and state education. Ingenuity and invention are thus in tension with what Hargreaves (2003) has called an irresponsible "hunger for profit."

Second, scientific, technological, and problem-solving innovation is universally welcomed by political authority, not so for innovation in artistic, literary, philosophical pursuits, and the like. The utilitarian or practical value of these pursuits is in doubt—hence endangered? Moreover, they thrive on individualistic values of the free thinker and have thus the propensity to cause "trouble"—hence dangerous?

Third, we may trace the difficulties and contradictions to the ideological conservatism in Confucianism. There is a basic contradiction between creativity promotion and authoritarian social control. Those ideologically bent on control may be tempted to restrict the definition of creativity to mean innovation in the service of a knowledge-based economy, exclusive of innovation that goes counter to societal order. The trouble is that a tightly controlled society does not foster creative entrepreneurs, let alone creative scholar-teachers. Hence, loosening control is a precondition for fostering creativity. A study of Chinese history substantiates this statement, when we compare the creative Tang dynasty, a period of openness, receptivity, and cross-cultural fertilization, with the uncreative Ming and Qing dynasties, during which China turned inward and shut itself from foreign influences.

Fourth, creativity, ingenuity, and invention can hardly be promoted in educational systems where examinations are the preoccupation of educators, parents, and students. A popular saying in mainland China states "Exams, exams, exams, the magic weapon of teachers; marks, marks, marks, the lifeblood of students."

The Japanese term *examination hell* expresses similar sentiments of awe. In Japan, Taiwan, and South Korea, the socioeconomic importance and fierce competition related to secondary school and university entrance examinations have led students and their parents to seek spiritual support through prayer and religious rituals. Japanese students leave donations and written prayers and promises to the gods at Shinto shrines specifically dedicated to academic success. All these are manifestations of what I and my colleagues have characterized as "examination superstition" (Ho et al. 2001). In short, examinations constitute the focus of academic anxiety, which rob students of the joy of learning, throughout Confucian heritage cultures. I end this paragraph with a prompt for the long-suffering Asian students: Of what use is a pen to a student, if he cannot beguile examiners *creatively* with it to win high marks?

I dwell upon formidable barriers to creativity for a good reason. It is ironic that programs aimed at promoting creativity are often singularly uncreative in their approach. Under pressure to meet economic imperatives, teachers and educators charged with the promotion of creativity often confuse *creative* teaching with *teaching* creativity through direct instructions on how and what to think creatively. Teaching creativity degenerates all too easily to a cookbook approach, in the manner of "An Idiot's Guide to …" or providing formulaic answers in the form of do's and don'ts. Witness how bookstores hungry for profit are flooding the market with books aimed at gullible Tiger Moms bent on "*making* their children more creative." Hopefully, the present volume will restore creative teaching and counter these pernicious trends.

Creative teaching and teaching creativity rest on fundamentally different views of human development. Teaching creativity assumes that creativity has to be instilled or inculcated from without. In contrast, creative teaching places trust in the human propensity toward creativity: For adults, creativity begins with undoing most of what we have internalized in our educational history. For young children, creativity is as natural as breathing; all that educators and parents need to do is to respect the Dao of human development, provide the milieu to foster its growth, and above all refrain from crushing it (see Sundararajan and Raina 2014).

The editors have invited "like-minded researchers" to share their views and their fruits of labor. In all likelihood, however, researchers can be like-minded in only in a broad sense, to promote the realization of the human potential for creativity. Beyond that, there is no necessity to be like-minded in their conceptualization and research methodology. A case in point is the expansion beyond the traditional conception of creativity as a matter of personality development. I discern a counter voice to conceptualizing creativity as within persons in the notion of "societal creativity" (Chap. 12, this volume). According to the editors, "Creativity is conceptualized within the persons, their sociocultural and developmental milieu." This milieu is clearly more encompassing than that of the school or family.

In the introduction to the volume, the editors make clear that creativity is a potential to be cultivated for all persons; it is not an asset of the privileged few, geniuses and artists. A perusal of its table of contents reveals a sizable coverage of diverse topics. The book is addressed, therefore, to a wider audience than teachers

and educators; it appeals also to providers of human services (as in Chap. 13, this volume) as well as business managers.

Contributors to the volume cannot be held solely accountable for how it will impact the development of creativity. Readers must also bear responsibility for how they will apply the knowledge they glean from the book creatively in actions.

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Chapter 1
An Introduction to the Volume of Creativity, Culture and Development

Ai-Girl Tan and Christoph Perleth

Creativity is an ability to generate new and novel idea, a life skill, and an (r) evolution-machinery deserves our continual attention. For the past decades, there has been nation- and continent-wide effort to search for collective wisdom to address nurturing creativity of all, in schools, at work, and after retirement. Creativity in the twenty first century is fundamental, to all. We believe that with creativity we see possibilities, we construct meanings, we create tools, and we attain good life in our ever changing societies and cultures. Given the importance of creativity in our life, we wish to pose some questions which guide our understanding of creativity in everyday, cultural life. How relevant is our knowledge of creativity to understand complexity of our life? How comprehensive is our expertise in guiding our young to meet current and future challenges in life? How useful are our skills in dealing with ambiguity in life? What shall we do if we wish to ensure that what we learn today is relevant, useful, and comprehensive enough for the future world and for what we shall do tomorrow?

To provide some insights into these questions, there have been numerous research projects, governmental initiatives, policies and programs for children in their early years, school-age children, adults at work, and retirees and the old age. Creativity is no longer an asset of the few geniuses or artists. It is a potential of all. In line with this open and broad understanding of creativity, creativity is conceptualized within the persons, their social-cultural and developmental milieu. It is timely to revisit our conceptions of the person in the developmental and cultural contexts. It is imperative to include all persons regardless of backgrounds to all nurturing and fostering creativity for good life projects, studies, policies, and programs. The volume of "*Creativity, Culture, and Development*" is an urgent assignment as it creates space for us to relook, reflect, and revise our views on creativity for the lived experiences in the twenty-first century. The volume is dedicated to two great scientists whose conceptions of the person are futuristic, revolutionary, and relevant to our

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aspirations. William Stern (1871–1938) advocated integration of disciplinary sciences (psychology and philosophy). He is regarded as a father of developmental sciences. His conception of the person as a multiple in unity creature (Stern 1917) is worthwhile revisiting (see Chap. 4, this volume). His pioneer research on and theory of child development has taught us that scientific investigations can start from home, in everyday life, and with reference to cultural practices. With the assistance of his wife, as a researcher who collected data, the studies of young children were embarked at home. Sterns investigated development of their own children. The Sterns adopted the diary method in their research, a cultural activity of many families. They co-authored valuable writings documents scientifically development of children from 0–18 years. Anna Craft (1961–2014) coined the term "possibility thinking" and popularized the concept of "little c" or everyday creativity. She studied extensively the phenomenon of creativity of young children (3–6 years old). Possibility thinking (PT) is a framework of creativity development (Craft 1999). There are three principles of PT, namely, using imagination to find ways around a problem, continuing posing questions naturally, and engaging in combinatory, social, experimental play that is non-structured and that is with multi-purposes (see Epilogue, this volume). Practical implications of PT for education include encouraging children to engage in making meaning, connections, and stepping beyond what is to what could be, providing opportunities and models for playing together and playing independently, creating time for playing during lessons, play-times, at the playground and dinner halls, and knowing some children will find it easier than others in engaging in PT. Both Stern and Craft show us that creativity research is a continual effort of scientists to understand how we develop competencies to live well. Creativity is within the young and the adults. They represent scientists who lived well with their visionary views in their life. W. Stern survived the world wars and Anna Craft the complex post-modern world. They were determined, hopeful, and creative people, seeing the world thoroughly, ahead of us and their life time. Their works were original and human-centered, relevant to address our urgent needs to nurture creativity of all in the twenty first century.

"Creativity, Culture, and Development" comprises original writings of creativity researchers of the present time. The volume invited like-minded researchers to share their conceptual frameworks, theoretical and research orientations in the fields of creativity, culture and human development. The volume has three objectives. First, the volume emphasizes the importance of promoting creativity in all cultures and through all educational opportunities. Such an objective can be achieved by continuous dialogues and discourses on establishing theoretical relationships between creativity and culture, understanding the significance of culture in creativity development, and the reciprocal role of developing creativity and enriching cultural activities. Second, the volume provides spaces for clarification for authors to reflect on contemporary creativity theorizing and practices (e.g., cultural, relational). Theorizing practicing creativity considers collective growth taking human relations, organization, and societal development. Third, the volume collects write-ups of research into developing human creativity in everyday life and in collective settings such as team, organization, and society.

This volume comprises three parts

Part I "Conceptions of Creativity, Culture, and Development" Comprises Four Chapters

In Chap. 2, Glaveanu presents his notion of relational thinking by examining the interrelation between development, creativity, and culture. There is little doubt that creativity, culture, and development are deeply inter-related phenomena. For most, a quick assessment of their relationship takes the form of 'creativity develops within a cultural context', which is certainly true. At a deeper level however we can notice that cultural systems themselves develop as well and creativity is a key agent of this macro-social transformation. Also, creativity and development are two sides of the same coin, in the words of Feldman (1999, p. 170), "creativity is quintessentially a development al matter". It could be equally argued that culture is quintessentially a developmental matter as humans' relationship to their cultural context is marked by the gradual accumulation, preservation and change of existing patterns of thinking and acting in the word. What we are left with is therefore the conclusion that creativity, culture, and development represent a unified triad but what exactly is the nature of each element as expressed through its relationships with the others and how can these relationships be conceptualised? The present chapter aims to address this fundamental question by proposing an analytical exercise of unpacking the meditational triangle in which each term mediates (here in the sense that it intervenes and shapes) the connection between the other two terms. Three main claims can thus be put forward. 'Culture mediates the development of creativity'. This assertion will be considered in light of Vygotsky's (1931/1997) research on the development of higher mental functions and his work on creativity and imagination in children and adolescents. 'Development mediates the relation between creativity and culture'. For Winnicott (1971), creativity and culture are twin-born in the first uses of the symbolic function, a developmental achievement that marks early childhood. 'Creativity mediates the development of culture'. This important observation can be traced back to Baldwin's (1903) discussion regarding the development of imitation and the two principles of habit and accommodation, central to the existence of cultural phenomena. This chapter will build on the scholarly writings of the three authors cited above and relate them to current research within the psychology of culture and creativity development. In the end, consequences of considering creativity, culture, and development as a triadic unit in theory and research will be considered in an effort to go beyond present dichotomies and advance forms of relational thinking (Glăveanu 2012).

In Chap. 3, Dai presents his view with the Needham Question that why China, with its seemingly advanced development of science and technology, failed to develop the modern science as we know of in the West, epitomized by Newtonian physics. The failure is often attributed to the Chinese culture, particularly its organismic, hence indivisible, view of the universe. While fully acknowledging the advantages of modern analytic science, with its mechanistic worldview, I shall point out that its reductionist epistemology and methodology is encountering serious difficulties in explaining, predicting, and controlling complex phenomena,

physical, biological, and social. In this regard, I argue that indigenous epistemologies of dynamism and emergentism, reflected in Chinese medicine, the game of Go, and Chinese philosophy, can be a source of inspirations for a non-reductionistic epistemology, which shows how everything is related to everything else, where causality is non-linear and complex, and when situations can be undetermined or underdetermined. The epistemic and instrumental value of the indigenous Chinese epistemology is its emphasis on cognitive flexibility, sensitive and adaptive to changing conditions. Given the dominance (or even monopoly) of the Western mechanistic worldview in the scientific and technological discourses, the indigenous epistemology of holism and dynamism may prove valuable as a source of inspirations for scientific endeavors, technological innovations, and practical decision making.

In Chap. 4, Tan-A outlines the understanding of the person as conceptualized by William Stern (1871–1938), a forerunner of integrative human sciences and a founder of psychology. It reviews influences of W. Stern's work on theories of the person in the social-cultural contexts as proposed by eminent scientists such as L. Vygotsky (1879–1934), and G. Allport (1897–1967). It concludes by emphasizing the urgent need to attend to neglected areas of human sciences such as life-span development, creativity development, and cultural methodology.

In Chap. 5 Tan-C and Li provide a comprehensive overview of the relationship between affect and creativity. Numerous studies have shown that affect such as mood and emotion can influence creativity. Despite studies generally suggest that positive affect is conducive to creative performance, contradict findings have also been documented. Indeed, negative affect has been found to enhance creativity whereas positive affect has been found to impair creativity in some studies. Different theories and frameworks have been proposed to understand the underlying mechanism though none of them can fully explain the phenomena. Based on the literature, we propose that how affect influences creativity depending on individual's personal interpretation of the affective state and personal interpretation of the task demand rather than the affect per se or the task demand per se. Furthermore, individual appraisal is the underlying mechanism that incorporates and compares individuals' personal interpretation of the affective state with personal interpretation of the task demand. As a result, appraisal mediates the relationship between affect and creativity. Theoretical and practical implications of this model are discussed. Taken together, our review calls for a novel angel to examine the link between affect and creativity.

Part II "Empirical Evidence and Practice" Comprises Six Chapters

In Chap. 6, He, Wong, and Hui investigated gender differences in means and variability on creative thinking. Gender differences in creative thinking remain an unresolved research question. Researchers have increasingly recognized that both mean and variability analyses should be conducted to uncover a complete picture of gender differences. Moreover, it has been suggested that gender differences in intellectual abilities are dynamic across age, and gender differences needs to be analyzed developmentally. This study aimed to reframe the study of gender

differences in creative thinking by (1) using both mean and variability analyses, and (2) employing a developmental perspective. Creativity was assessed with the Test for Creative Thinking–Drawing Production (TCT–DP) which was developed based on the componential model of creativity. The TCT–DP scores of four age groups (N = 2,219), which included participants of ages 3–7 years, 9–13 years, 14–18 years, and 19–23 years, were analyzed. Results showed that while mean analyses generally revealed trivial gender differences, variability analyses tend to support great gender differences. Furthermore, developmental data demonstrated that the magnitude and the direction of gender differences change across age. While greater female variability (favoring girls) was observed in young children, a reverse pattern that was found in adolescents and emerging adults. The findings shed lights on the different developmental trajectories of boys and girls in creativity.

In Chap. 7, Chung, Leong, Fun, Loo, and Yan reported on a study that explored Creativity in Preschoolers through Chinese Reading Comprehension ebooks. The aim of their study was to explore how Chinese reading comprehension skills develop in bilingual children in Singapore and if language abilities were related to dimensions of creativity. The sample consists of 17 pre-school students with an age range of 4–6 years old. The students first took a placement test to find out their level of reading comprehension. Then, they were given selected ebooks to read. After they read each ebook, they were asked to draw a picture related to the ebook theme. The drawings were then analyzed against seven dimensions of creativity. We found three areas for further, larger scale investigation, namely, how synthesis, integration and originality develop in bilingual children, how children integrate concepts from reading and from illustrations in books, and whether inference skills influence coherent drawings in children.

In Chap. 8, Tan-R and Tan-A investigated children's affectivity and efficacies. A total of 123 students in Singapore filled out a survey which comprised two affectivity scales and four creativity efficacy scales. Measures for affectivity were the Positive and Negative Affect Scale for Children (PANAS-C), the Multidimensional Students' Life Satisfaction Scale (MSLSS). Measures for efficacies were the creativity self-efficacy scale in cognitive style, creativity self-efficacy scale in working style, intercultural efficacy, and civic efficacy. Individual differences for highly creative and less high creative participants of the study on affectivity and efficacy were investigated. Correlational and regression analyses were performed. Suggestions for future studies are presented.

In Chap. 9 Dziedziewicz, Gajda and Karwowski report on a program that aimed to develop children's Intercultural Competence and Creativity. The chapter presents the results of an intervention study examining the effectiveness of the Creativity Compass program, aimed at developing intercultural competencies and creativity in children. One hundred twenty-two children, age 8–12 years old, took part in the intervention. The results indicate the high effectiveness of the program in stimulating creative abilities and intercultural skills. The analysis provides arguments that effective stimulation and development of both creative abilities and intercultural skills is possible and may form a response to the need to prepare students for a globalized and multicultural world.

In Chap. 10, Hennessey presents her view on assessing Schools on Creativity. She shares a Toolbox for U.S. Teachers and Policymakers and a To-Do List for Researchers Worldwide. Over the past 35 years, the U.S. educational pendulum has swung from one teaching approach and agenda to the next. Each new reform has brought with it at least as many problems as solutions, and schools have been in almost a constant state of flux as they strive to meet an ever-changing set of goals and criteria. Most recently, a new national "crisis" has been identified. Educational analysts and policymakers now worry that the standardized tests that have come to dominate the instructional landscape are based on far too narrow a measure of student success. Also needed, say the experts, are indicators of the opportunities provided by schools for students to engage in creative work. Importantly, the response to this criticism has not been to abolish high-stakes tests. Instead, the proposal is to augment the existing tests with creativity rubrics. Massachusetts will be the first state in the U.S. to institute a creativity index against which all public primary schools will be judged. Based on what is known about the social psychology of creativity, however, it is not at all clear that it will even be possible to legislate creativity in the schools. A call is made for educators and policymakers to become familiar with the research literature and the lessons it offers about the intersection between the classroom environment, the creativity demonstrated by students and their motivational orientation. Towards this end, two toolboxes are offered, one for classroom teachers, school administrators and evaluators and the other for investigators and policymakers worldwide.

In Chap. 11, Hui reviews the prevalent trend of promoting creativity education in four Chinese societies (China, Hong Kong, Singapore, and Taiwan). The relational theory of creativity proposed by Glăveanu (2012) provides a critical basis for analyze the five dichotomies of creativity include individuals versus society, Big C versus little c, evolutionary versus revolutionary, domain generality versus domain specificity, and product versus process in the Chinese context. The relational perspective offers and extends an interdependent and interactive approach to the study of creativity. In parallel, the action theory of Brandtstadter on the convergence of action, culture and development will be adopted as a theoretical framework to investigate how creative self-efficacy in a sample of about 1729 Hong Kong adults is related to psychological and sociocultural factors across the lifespan aged from 18 to 60 above. Regression analyses have shown that both psychological factors (perceived desirable gains in creative personality, perceived losses in creative personality and self assessed creative personality) and cultural factors (normative belief in creativity, and rewards for creativity in society) explained a significant variance of 44 % in predicting creative self-efficacy. The cultural factors mediated the effects of psychological factors on creative self-efficacy. Results supported that cultural factors emphasized in the relational perspective were as important as the individual psychological factors in building up creative self-efficacy in individuals. Implications and limitations will be discussed.

Part III "Valuing Creativity" Comprises Four Chapters

In Chap. 12, Glaveanu conceptualizes societal creativity. According to him, we are used to thinking in psychology about creativity as an individual type of phenomenon and, as such, we tend to formulate questions and create methodologies that focus primarily on the individual person (even within studies of group creativity). At the same time, some the most popular criteria used for recognising and validating creativity have to do with novelty, originality and social utility. And yet, the 'social value' of creative acts is measured again against the performance of individuals in privileged domains such as the arts and sciences. However, the world today faces as, collectively, with increasing demands and challenges: from global warming and the effects of economic meltdowns, to creating more inclusive and democratic societies. The way in which we (as individuals and as groups and communities) respond to such difficulties is proposed as a general domain of reflection for creativity researchers—the sphere of 'societal creativity'. Why is this area so much less visible in psychology and related disciplines than other traditional domains of creation? There are multiple reasons for this, including the fact that acts of societal creativity are typically attributed to individuals, like scientists or inventors, and that a construct like this is difficult to operationalise and study within the narrow confines of psychometric or experimental approaches. Societal creativity collapses the sharp differences set between individual and collective creativity, between revolutionary and everyday creations. This talk will elaborate a cultural psychological account of this 'creative domain' and illustrate its relevance for both creativity theory and society development in the context of today and for the world of tomorrow.

In Chap. 13 Wong considers the potential of carrying capacity of the agencies serving the visually impaired and how organizational creativity can be leveraged to foster networking to better serve the community. The classical economic problem is the question of allocating scarce resources to unlimited wants. This problem is no different, and is arguably more pronounced when considering the needs in the charity, or social service sector given their nonprofit status. In response to the limitations, the study of community carrying capacity examines 'the number of organizations that can be supported by resources in a particular environment'.

In Chap. 14 Mito explored professional musicians' notions of creativity in musical performance. Seven musicians who specialized in Western classical music, jazz, Indian classical music, and Japanese traditional music were interviewed. Their conceptions of creativity were investigated by asking questions concerning originality, tradition, and value of musical performance. All of the participants placed high value on the traditions of their musical genre and considered that creative performance is created on the foundation of the fundamental rules and conventions of the genre. However, the analysis revealed that the notions of creativity were different among the musicians in different genres, which led to different views on how to develop creativity.

In Chap. 15 Hui, Yeung, and Sue-Chan presented a study that adopted an interactional perspective to examine the team processing of working adults in both

creative and non-creative industries in Hong Kong. Participants included 737 individuals across different industries (advertising, performing arts, information technology, and other non-creative industries). Factor analysis has yielded 4 factors in team processing, including creative synthesis, norm for team, teamwork, and reward for team creativity. Team process and perceptions of mini-c and Pro-c creativity in creative industries were higher than those in non-creative industries. Results from hierarchical regression revealed that team process (creative synthesis, norm for team, and reward for team creative) and mini-c (social axioms of creativity, and creative personality) were significant predictors of creative self-efficacy after controlling for age, gender, educational attainment, income level and nature of industries. Team processing variables had greater effects on creative self-efficacy. Implications and limitations were also discussed.

Understanding creativity in the past decades has ensured us that creativity is within every person, society and culture. Creativity broadens perspectives in life, thinking of possibilities, and inclusive of all members of the societies for good life. Understanding of and nurturing creativity of all shall go on at the multiple levels of theorizing, researching and practicing beyond the genius and individual paradigms towards inclusion of the cultural and systems paradigms. Accordingly the next leap of inquiries into life shall relate to creative synthesis of our understanding and knowledge of creativity. We may pose questions, such as: How could we be creative? How could familial, school, and social institutional policies, as well as culture of a community influence styles of interactions, learning, creativity, and development of people or groups? We may engage in seeing possibilities in life, creating inclusive communities in our societies, and transforming cultures for humanistic future. Nurturing creativity is cross-curricular, including playing through for example "puppetry, dramatic play, role-play, open-ended scenarios, improvisation, empathy work, …brainstorming, storytelling." (Craft 1999, p. 146). The list of activities that nurture creativity is preliminary. The readers and contributors of this volume are invited to share theirs and are encouraged to suggest more.

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Part I
Conceptions of Creativity, Culture, and Development