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“There is nothing new under the sun,” proclaims the biblical writer of Ecclesiastes.

Perhaps. Still, a careful observation of the very young at play yields the delightful certainty that there are countless new ways of encountering and manipulating the same old basic items that have always been present: the blocks, the clay, the paint, to name just a few.

Alas, in a 2011 presentation, Sir Ken Robinson denounced the present education system “for draining creativity from children.” For instance, he revealed that 98% of a sample of Kindergartners was able to conjure up a plethora of uses for a paperclip while this divergent thinking skill-set tended to deteriorate progressively as children reached 8-10 years and then 13-15 years of age. By the time they were in college, creativity seemed beyond these students’ grasp. Robinson defined creativity as a process of producing original ideas that have value and divergent thinking as an essential capacity for creativity—an ability to think laterally and respond to questions in multiple ways.

A quick glance at the literature about creativity offers a shocking (for many) revelation: few authors on the topic describe a disappearance of creativity as it informs the graphic or literary arts. But in his fascinating new book, Creating Innovators, Brad Anderson, the former CEO of BEST BUY, passionately writes, “There isn’t anyone who doesn’t need to be a creative problem solver.” He also introduces Dov Seidman, the author of How: How We Do Anything Means Everything. Dov Seidman named his son “Lev Tov,” (a good heart).

He explains,

*He needs to spend the rest of his life earning it, and my job is to help him become that person. It’s about values, it’s about character and it’s about the strength to be resilient and keep your feet on the ground when unthinkable things happen.*

So reclaiming the native creativity that has been bequeathed to each one of us, nurturing it so that it can enrich our private and communal lives as well as transform the planet, is the gauntlet that has been thrown down; a really supreme challenge. The volume you hold in your hand grapples with this challenge and dips into a vast range of topics. Here we offer you a quick taste of creativity issues from early childhood development through adult creativity practices and applications in everyday life, education, media and, of course, the arts.

Though this is not a how-to book, the case that Carol Wagner and Danielle Schlough make in Creativity, A Childhood Essential, for nurturing a child’s divergent thinking is based on the developmental theories of the great luminaries, including Sigmund Freud, Erik Erikson, Urie Bronfenbrenner, Jean Piaget and Lev Vygotsky. More specifically, Wagner and Schlough consider how creativity develops
and how it impacts cognitive and social-emotional development in childhood. The chapter also explores how the stimulation of children’s divergent thinking during early childhood will benefit them in years to come. Wagner comments that “Creativity is interesting because it’s what makes mankind different from any other form of life.”

Though her passion is forensic psychology, Alicia Ferris is also fascinated by the notion of how a human being emerges as an adult and how to stimulate creativity in the crucial years of development. In Creativity in the Emerging Adult, she refers to theories presented by Erik Erikson, Jean Piaget and Sigmund Freud, in addition to the developmental theories of Jeffrey Arnett and James Marcia. Since emerging adulthood comprises the integration of certain milestones such as the development of identity and intimacy and the transformation from dependence to independence in college, relationships and career, this chapter considers creativity in the context of identity, family, relationships, cognition, college and the workplace.

A. Kristina Keyser and Michael Corning introduce the developmental and intelligence theories of middle and late adulthood and relate them to creativity. Keyser, concerned that a common perception of the elderly includes limitations such as a decline of interests and physical abilities, shows that analyses of the theories noted above actually reveal how this period of life can be the most creative of all. This hopeful chapter also features a comprehensive look at how creativity might be stimulated in one’s later years by considering developmental theories and the impact of a cognitively rich environment.

Though the time-honored advice of how to get to Carnegie Hall is, “Practice, practice, practice,” Oded Kleinmetz, (Train Yourself to Let Go: The Benefits of Deliberate Practice on Creativity and It’s Neural Basis), lives, works and studies far from that iconic concert venue, in Haifa, Israel, and offers a surprising finding about practice. Clearly an artist needs to practice in order to reach a high level of expertise, but does all that repetition not result in automatization—the antithesis of creativity? Kleinmetz proposes that the artist should deliberately practice improvisation, training himself to “let go, reducing the stringent evaluation of ideas.” Kleinmetz even maintains that reducing inhibition in this way can have “domain-general effects such as increased creativity scores and changing neural functioning in non-artistic domains, as well.”

Though Kleinmetz’s research is as exciting as it is practically effective, the great challenge to schools in America and abroad is how to produce more creative people altogether. The question has been asked since at least 1950. Thankfully, policy makers, educators and research scientists globally, recognize its importance. In Creativity in the Schools: Educational Changes Lately? Daniel Fasko, whose work in addition to creativity includes moral reasoning and critical thinking, reviews past and current research and practice on developing creative thinkers in primary and secondary levels in the schools. He not only describes “relationships among creativity and learning, motivation, personality, insight, meta-cognition and achievement” but also presents techniques to help develop creative thinking in our schools so that our children can become the innovators and entrepreneurs of tomorrow. He ends his chapter with “implications for future research and practice.”

If you think you’ve heard it all, consider Chapter 6. Becky Boesch of Portland State University, who helped reform general education and student centered learning and inquiry based programs, takes you outdoors and allows for learning through the coupling of creativity (divergent) and analysis (convergent) thinking in an integrative learning task. In her chapter, Enabling Creativity: Using Garden Exploration as a Vehicle for Creative Expression and Analysis, she describes how “the students explore the concept of metaphor, which provides mental associations and ambiguity.” With that grounding, “students experience three very different types of gardens and try to uncover the metaphor of nature lying within their
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design.” Later students create montages that reflect their understanding of the metaphor “emerging in the garden itself,” utilizing the photos they’ve snapped and the journals they’ve written. The aim here is to be sure that this educational activity involves the whole person, as current developments in cognitive neuroscience suggest they should.

Though we know that Turks learned the art of designing gardens from the Greeks, the Romans and the Persians, (and they also loved outdoor living—at least during Turkey’s Ottoman era), Ayhan Dikici, currently associate professor of the Department of Curriculum and Instruction, the Faculty of Nigde University in Turkey, is far less interested in planting gardens than in rooting out teacher behaviors that do not foster creativity. His special interest is in the visual arts and creativity in teacher training, creativity in the classroom and alternative assessment and evaluation methods. Initially Dikici looked into the biographies of great artists, their work and creative abilities. He wondered, “What is creativity, what is associated with creativity? Can one be trained to be creative? ...Paul Torrance and other writers impressed me a lot. As a result, I have always wanted my students to enhance their creativity no matter what their majors are.” In our seventh chapter, Revisiting the Relationship Between Turkish Prospective Teachers’ Thinking Style and Behaviors, Dikici examines the relationship between prospective teachers’ thinking styles and creativity fostering behaviors. The not-so-surprising results should be instructive to anyone involved in the education enterprise.

How liberating it is to cast our net in wider and wider arcs, the better to capture more tidbits of wisdom concerning creativity. This time we’ve gone down under to the University of South Australia and the Eynesbury Institute of Business and Technology where Janine Pierce and Donna Velliaris join Jane Edwards. The three have collaborated to present A Living Case Study: A Journey Not a Destination. Living Case studies in business provide a bridge from knowledge acquisition to knowledge practice in a real world context. Thus the student learns through experience. The chapter “provides an overview of the journey from planning to implementation.” Within this project, Jane Edwards’ research proved that using graphic and verbal cues for teaching new concepts improved students’ understanding “by creating links with students’ previous knowledge, while verbal and visual encoding enabled deeper processing, resulting in better recall of new concepts.” Donna Velliaris posits that “Creativity provides the opportunity for students to explore and solve problems in a more stimulating way and can help make sense out of complexity.” Finally, Dr. Janine Pierce, academic coordinator of the Eynesbury Institute of Business and Technology and the South Australian Institute of Business and Technology, has extended her research from sustainable communities to working with local and international students, students with special needs and with the “Net Generation.”

It is likely that only a few members of the Net Generation engage in Greek folk dancing, but those dancers, shoulders erect and heads held high, begin slowly (Zorba-like) and then carefully follow the music, weaving in and out of classic formations until the music carries them faster and faster and their footwork rivals that of iconic Irish dancers. The performance of this Greek dance could certainly serve as a metaphor for Vaipta Giannoulis’s (of Aristotle University of Thessaloniki, Greece) chapter entitled, Creativity and Giftedness: A Study of Attitudes. Here she offers a careful historical overview of research on the topic. The chapter moves on to a review of data from neuro-psychological research concerning children, adolescents and adults who are both creatively and intellectually gifted, that is, they display enormous, brilliant originality and inventiveness in highly demanding and/or scientific fields, leaving observers as breathless as the classic Greek folk dancers.

Well aware that the spontaneous creativity of children narrows naturally in development, the authors of Hey Inner Four Year Old, Wanna Play? Creativity in Children’s Media would have the children’s
fingers happily dance on touch-screen apps to stimulate their learning and development. In fact, Dr. Charlotte Duncan, first writer of this chapter and a graduate of Harvard University’s Graduate School of Education with an M.A in Technology, Innovation and Education, first became interested in children’s media as she worked a summer internship at Sesame Workshop and tested Sesame Street apps and web games with preschoolers. Of this experience she wrote,

*It was a transformative experience watching these children laughing, playing and learning before my eyes...a trend that has fascinated me is how much more exploratory children are with their media experiences than adults. Throughout our chapter on creativity in children’s media, it was inspiring to explore the evolution of creativity as children age, how media can facilitate their creativity and what we can learn from children to support our own creativity as adults.”*

Second author, Colleen Russo, a doctoral student at Vanderbilt University’s Peabody College, focuses on children and media, specifically on how new technology affects young children’s cognitive development, representational insight and general learning. Her interest in these areas was piqued by an internship with Tone Thyne, who oversees FableVision’s development of original animated properties, including television games, apps and other digital content.

In this chapter, Duncan and Russo discuss the roles of creativity in children’s media from multiple angles: the importance of creativity in children’s play and development, how creativity is cultivated through effective media and the creativity involved in producing media content. The discussion is greatly enhanced by the exploration of scientific underpinnings and extensive interviews with Tone Thyne (mentioned above) and J.J. Johnson, a prominent creative producer in children’s media.

Children around the globe enjoy the dynamic products of the animation industry. Drs. Zheng Liu of Xi’an Jiaotong-Liverpool University and Lei Ma of Nanjing University of Science and Technology—both in China—have been conducting research on the animation game industry since 2007. It is fast growing, and their first research project focused on the industry chain and inter-firm collaboration. Later they noticed that creativity and innovation were the real value-added areas in the industry, so they further explored creative activities along the industry chain, particularly the conceptualization and production stages, comparing differences between leading western firms and Chinese firms. More specifically they point out that while tried and true, large firms like Disney and Pixar continuously seek strategies to expand, improve and innovate, most Chinese companies, as late-comers, strive to upgrade their capability through original design technology development and policy support. This chapter focuses on “creativity in the animation industry with an analysis of brand/character development, technology innovation and policy influence.” Recommendations for future research round out the chapter.

Speaking of animation, I have long wondered what the criteria are for winners of national and international awards, such as the Emmys and the Nobel Prizes in any number of areas of expertise. Once the winners are announced, various individuals and organizations working with the media have broken through the reticent character of a great many recipients and, treated us to detailed descriptions of the winners’ “process,” which is usually fraught with unremitting work, frustration and even failure. Their eventual successes are often elusive. How brilliant an idea it is to examine the communication of these media groups that cover, for example, the laureates’ convocations and discussions and reveal their insights into the creative process. In *Accessing the Finest Minds: Insights into Creativity Recommendations for Future Research Directions*, Lukasz Swiatek of the University of Sydney, Australia, argues that the communications of organizations that present awards and prizes, such as the Academy of Motion Picture
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Arts and Sciences, the Nobel Museum and the Screen Actors’ Guild Foundation, help foster creative excellence. He explains, “I’ve always been interested in creativity in general. It’s a central aspect of the media and communication industries in which I’ve worked for over a decade.”

Creativity, media and even animation figure greatly in Nava Silton’s pedagogic approach at Marymount Manhattan College. She writes, “I will always assign traditional and “non-traditional” creative assignments in each of my courses. I believe these assignments allow my students to think outside the box and take material and information far beyond the classroom walls. But the project described in Chapter 13, Realabilities: Harnessing Creativity to Develop a Children’s TV Show and Comic Book Series, is by far, Nava’s great passion. You will read about an animated TV show and comic book series that strives to enhance the cognitive attitude and behavioral intentions of typical children to their peers with disabilities. Realabilities utilizes creative media “to emphasize the strength of five characters with disabilities who harness their special competencies to save their school from bullies.” Future creative directions including a Realabilities Puppet Musical to sensitize preschool children, and virtual simulations to sensitize teachers, special educators and typical middle school students to individuals with disabilities, are also discussed.” One hopes that new-found compassion and understanding on the part of these children and adults--possible future scientists and inventors--will result in wide-open horizons to inspire creative modalities that may actually ease the severity of these disabilities in addition to banishing bullying.

Though the highest form of flattery is, we are told, imitation, students have certainly not had positive outcomes in their schooling from elementary through college levels when they have resorted to “copying” or imitation. Certainly in the arenas of art, science, scholarship and literature outright copying or plagiarism is cause for scorn and scandal. Or is it?

Chapter Fourteen brings us The Benefit of Imitation For Creativity in Art and Design: The cases of Gerhard Richter and J May, by Laurens Rook of Delft University of Technology, The Netherlands. This fascinating study acknowledges that many artists borrow, cite or seek inspiration from outside their own practice. Rook hopes to show that such imitation “offers creative professionals the opportunity to introduce an element of surprise into the creative act. Therefore, a creative product with very little originality can, nevertheless, be considered creative.” To demonstrate the benefit of imitation for creativity in art and design, Rook examines the working processes of the painter, Gerhard Richter and the car designer, J May—both of whom used external source material in their own creative work. Laurens Rook thinks he was born fascinated by creativity, fine art and cars. He explains that he attended Art College in the postmodern 1990’s when using existing mass media images with a twist (appropriation) was the dominant paradigm in contemporary art. A review of his background, however, demonstrates that he is also a “Renaissance Man,” having focused his research on “creative cognition, behavioral informatics: combining experimental research design with the analytical tools of computer science.” He lectures on research methodology, statistics and group dynamics but is also a graduated professional artist with collected work in the municipal archives of Rotterdam, the Netherlands and the National Art Collection of Ireland.

Though the art made by individuals undergoing Art Therapy may not often hang in any renowned art gallery, the process of making art “may help to access and awaken a client’s latent creativity.” Rachel Brandoff, Executive Coordinator of the Expressive Therapies Summit, runs a clinical and supervisory practice in NYC, and specializes in working with adults facing life transitions, clients with grief and loss issues, and couples and families using art therapy. She is currently serving as the ethics chair of the Art Therapy Association and teaches art therapy at Marymount Manhattan College. She explains that an art therapist “helps a client reestablish creative thought and flow by encouraging the use of art materials which involve the client in an art making process and facilitates reflection on art made in the context
of psychotherapy.” Once a client exercises the creativity muscle, “she may access problem solving and original thinking approaches.” Ultimately these skills will hopefully generalize to other areas of life, clearing mental blocks that have prevented clear and creative thinking. Find details in Chapter Fifteen.

It’s incredible to think that engaging in the usually pleasurable process of making art can actually help resolve psychological issues. Dr. Richard Tietze (Creativity and the Arts) has actually developed a minor at Marymount Manhattan College in Art Therapy, as well as courses such as Psychology Portraits in Literature, Family Processes, Group Dynamics, Jazz and American Identity and The Psychology of Music. His chapter incorporates discoveries from neuroscience “into an understanding of normative, creative functioning and distinguishing normative developmental creativity from professional creative discovery in the arts, focusing specifically on art and music.” He concludes with a description of a normative application of creativity to creative arts therapies and suggestions for incorporating creative tools into everyday life.

What if centuries of creative tradition and craft have been forgotten or, worse, discarded? Dr. Arwah Madan is a specialist in economics from the University of Pune, Maharasta, India and completed her doctoral research in Financial Management and Quantitative Technique. Her research interests are broad: Banking and Finance, Capital Market, Law and Economics, Corporate Governance and Women’s Development. She presently is Associate Professor at the Department of Economics, St. Mira’s College for Girls. In our final chapter, Innovation and Craft Revival—Empowerment and Sustainable Livelihoods, Prof. Madan tackles the revival of ancient “Lambani” Embroidery through Sambala, an organization located in one of the districts of southern India. Commercialization can easily reduce an artisan to the status of “laborer.” It is vitally important to assure that the creative design and execution of the craft are unified in the revival and preservation of this precious craft.

Creativity Inc. (Random House, 2014) is a fascinating book that offers readers full disclosure into how the Pixar and Disney Studios cultivate creativity as a crucial central mission to enchant and electrify their audiences again and again. Author, Ed Catmull, President of Pixar Animation and Disney Animation, suggests that this book is for anyone who wants to work in an environment that fosters creativity and problem solving. He continues, “I believe, to my core, that everybody has the potential to be creative, whatever form that creativity takes...and that to encourage such development is a noble thing...”

Clearly you, dear reader, understand that this volume with studies that span the globe and countless topics related to creativity is a noble undertaking, but it is much more. It is, indeed, a treasure hunt of the highest order. To reveal and cultivate this often elusive gift of creativity requires heroic efforts, but the outcomes are worthwhile: a better world where the arts, the sciences, the economy and medicine (to name a few) will have the best chance of bathing in the golden light of open, creative minds that can solve problems that have defied us till now.

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