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Roisin Donnelly
Dublin Institute of Technology, roisin.donnelly@dit.ie

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Fostering of creativity within an imaginative curriculum in higher education

Roisin Donnelly*
Course Co-ordinator, Learning and Teaching Centre, Dublin Institute of Technology

Psychology is frequently used as a foundation discipline in the training of adult educators because it addresses those questions which naturally emerge from an engagement with adult learning and teaching (Tennant, 1997). The professional context which forms the focus of this article is no different. By providing academic support for lecturers in a higher education institution in Ireland, there is a desire to develop a sustainable curriculum model whereby by working with them on designing and developing creative curricula in their various subject disciplines in the arts and sciences they, in turn, pass the benefits of this on to their students.

Keywords: *creativity; adult learning; curriculum design; higher education*

Background

This reflective investigation recognizes that the psychological literature has a significant bearing on the evolution and fostering of creativity within the imaginative curriculum in higher education. This article will attempt to make advances into how the practitioner can proceed to apply the output of the relevant psychological literature to the activity of teaching lecturers the importance of creativity in the higher education curriculum, and passing this on to their students.

Henri Bergson, the French philosopher, once wrote, 'I believe I experience creativity at every moment of my life!' (Prigogine, 1989). Creativity research suggests that this is humanly possible, yet many questions still exist and are debated and discussed at length in academic circles. The focus of this work is to explore creativity research in higher education in order for it to inform the curriculum design process.

It is important to explore the implications of creativity research for learning and teaching in higher education. It could be argued that the relative lack of cross-fertilization in the past is not surprising given the relative youth of the creativity field. Joy Paul Guilford directed the American Psychological Association in his 1950 presidential address to focus on this important but hitherto neglected area.

*Learning and Teaching Centre, Dublin Institute of Technology, 14 Upper Mount Street, Dublin 2, Ireland. Email: roisin.donnelly@dit.ie

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Many attribute the neglect of creativity to a number of reasons: the Platonic notion that creativity is a mystical phenomenon; the persistent belief that creativity is a spiritual process that does not lend itself to scholarly scrutiny; or the fact that early twentieth-century schools of psychology, for example, structuralism, functionalism and behaviorism, ignored creativity. There has also been a proliferation of 'pragmatists', evangelists who popularize and promote creative thinking without testing the validity of their ideas.

From an analysis of research conducted in the area of creativity, I was aware of how scholars in the field have in the past and are currently defining the phenomenon. It was also useful to have a working definition of what creativity meant for my own professional context. I have a number of adjectives which for me add to this definition of what is meant by creativity in the higher education curriculum: putting things that are already together in a different way by being generative, innovative, expressive and imaginative. This is based on the belief that the lecturers are already being creative within their own disciplines, and need an open, free and safe forum in which to express their creativity. Human beings use cognition creatively, by continually modifying and using concepts to try to deal with everyday life problems. Creativity also arises from tacit, intuitive knowing. Bohart (1999) argues that the creative process is one of articulating tacit or experiential knowing in words or symbols.

Alongside this, it was very insightful to explore the various approaches to creativity research and measurement of creativity. There is still no consensus within the literature as to whether creativity is located in a person, a product or a process. There is agreement, however, that creative work is both novel and valuable (Mayer, 1999). People tend to think of creativity as a trait—a single attribute with which we are born that is relatively fixed in quantity. Many regard creativity as something that only very gifted people possess. There are multiple kinds of creativity, and one of the arguments in psychology today is that everyone can develop at least some of these (Sternberg, 2002). Boden (2000) believes there are three forms of creativity: combinational, exploratory and transformational; like Gardner (1984), she concludes that creativity is not an all-or-nothing phenomenon. Other researchers exploring whether the computer stifles creativity conclude with a call for enlightened discourse by researchers in this area rather than polemical stance-taking (Abbott *et al.*, 2001). There is a lesson for everyone in that.

The most common kind of creativity is conceptual replication, whereby someone produces a minor variant of work that has been produced before. This kind of creativity is a 'limiting case' of creative thought. Most successful inventions and scientific discoveries represent 'forward incrementation' which basically takes existing ideas and moves them to the next step in the direction the field is already going. Often more radical approaches take a field in a new direction, and include reinitiations, which represent essentially a 'starting over' of how people think about a problem.

Such a complex phenomenon as creativity has generated a wide variety of research approaches; with each of the methodologies of psychometric, experimental and contextual contributing unique insights to our understanding. Psychometricians, such as Guildford and Torrance, assume that creativity is a measurable trait, and focus

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on developing tests which measure divergent thinking. Psychometricians have long tried to sort out the relationship between creativity and intelligence. They have also studied the personality traits of creative individuals and, for the purpose of designing imaginative, creative curricula, have found interesting patterns. Positive traits include curiosity, high levels of personal energy, being attracted to complexity and novelty, tolerance for ambiguity, open-mindedness and persistence in the face of adversity (Feist, 1999).

Creativity has emerged as a complex concept, and questions abound within this. For many years in psychology the most fundamental question has been: what is creativity? However, the simplest question of all, which comes before the other controversials of definitions, measurements or attempts at enhancement is: where is creativity? It is important to look at the role of the environment and then of the individual, both from a psychomotive and a cognitive perspective, and how they interact (Sternberg, 1998). Csikszentmihalyi (1998), best known for his systems model of creativity, concurs, stating that what we call creative is never the result of individual action alone (in Sternberg, 1998).

The study of classroom learning has had similar developments. Boekaerts and Boscolo (2002) discussed how experimental psychologists had assumed from the beginning that mental faculties such as cognition, memory, perception and learning could be studied in isolation, and how this had been the dominant view in psychology. It was not until the last two decades that situational interest (interest generated in the situation) has been shown to improve student learning through better strategy use. Linked to this, Sternberg and Lubart (1991) stressed that 'if we want students to be creative, we have to model creativity for them, and we will not be able to do that if we seek to turn students' minds into safe-deposit boxes in which to store our assorted and often indigestible bits of knowledge'. Therefore, learner construction of knowledge is an important element for the development of creativity, and creating the right motivational climate for learning is part and parcel of this. The literature provides an excellent stepping stone from which to explore further the concept of creativity for my professional practice.

Practical implications for professional context

I am an academic tutor in the Learning and Teaching Centre (LTC), based in the Dublin Institute of Technology (DIT). The research outlined in this article is emerging from the curriculum design process within a postgraduate lecturer training course, the postgraduate certificate in Third Level Learning and Teaching, the first such course designed specifically for lecturers in the sector in the Republic of Ireland.

The LTC supports the learning, teaching and assessment activities, including integrating learning technologies, of all academic staff at the Dublin Institute of Technology. This is supplemented by increasing awareness of current national and international research and strategies related to learning and teaching in higher education. The goal of the LTC is to offer resources, consultation and a forum for discussion to help lecturers in turn provide a valuable learning experience to all DIT students.

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Changing paradigms: learning and teaching in higher education

It has been argued by Siegler (2002) that with the cognitive revolution in adult experimental psychology and the rise of Piaget's theory within developmental psychology, the emphasis has shifted from learning to thinking. Within the context of higher education, some researchers have taken the view that if psychology is to have an educational impact then it is at least as important to study teachers and teaching as it is to study learners and learning (Desforges & Fox, 2003).

Certainly, in this context, within the last two years, there have been moves to understand what is meant by the paradigm shift, from teaching to learning. The rationale for the paradigm shift is based on current awareness that the institution here had been founded, and was in the past judged, on the quantity of resources and the provision of instruction rather than the attainment of quality of their students' learning and success. The proposed model of the learning paradigm aims to provide a practical and realistic alternative that addresses the needs of learners within an evolving and changing external community. This necessitates a move away from an institution that functions as a provider of instruction to one that becomes a centre for excellence in learning.

Aims

The main aim of this research, therefore, is to support the paradigm shift through the introduction of creativity to the curriculum design process generally within the institute, and specifically foster what may be coined 'the imaginative curriculum' within module two of the postgraduate certificate in Third Level Learning and Teaching. It will be important to link the thinking behind the paradigm shift in order to ultimately develop students' critical and creative thinking. There has been significant work conducted in the area of critical thinking and there is a growing body of research on the importance of the creative climate in the workplace, but there has been little venture made to translate creative thinking dimensions into the higher education classroom. From the existing research base in the psychology of creativity I have focused on a number of opportunities for the development of an aspect of my professional practice within a module entitled 'Designing curricula and assessment strategies' on the postgraduate certificate.

First, grow opportunities for thinking and acting creatively to design a curriculum project for the lecturers to develop within the module. Second, allow lecturers on the module to experience a social, creative process of educational group work in order to critique/adopt/replicate these processes with their own students. Third, explore and play with specific ways of fostering creativity with lecturers on their discipline-specific courses. Fourth, provide open, free learning spaces for the lecturers to express their own creative thinking and, whenever possible, provide opportunities for lecturer choice and discovery. Finally, it is important for the tutors teaching on the module to be a role model by promoting supportable beliefs about creativity, and teaching techniques and strategies for creative performance. All these are vital to

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provide a basis for the expansion of this postgraduate module for lecturers in higher education.

Designing curricula to include creativity

Ongoing evaluation of the module 'Designing curricula and assessment strategies' has, in the past two years of its operation, shown to have had a profound effect on the learning strategies adopted by lecturers. Effective curriculum design can ensure that their programmes meet identified educational needs and that teaching methods and assessment strategies are selected to achieve programme objectives. Implicit in this is that curriculum review and evaluation facilitates the keeping up to date of courses and continuously improving them. Current interesting international developments in curriculum design can also inform practice.

The aim of the module is to facilitate lecturers taking a competent active role in the development of high quality curricula in their own contexts. The module will enable lecturers creatively to explore, and to utilize, a range of ideas on designing curricula as well as to understand the use of different types of assessment strategy. A specific objective is to apply a range of curriculum development models creatively to their own practice through the design and development of a group-based curriculum project.

Being creative is an arduous undertaking. Sotto (1999) believes it is a matter of developing a sensitivity based on systematic study, endless practice and deep reflection. It is in this way, he argues, that teaching itself can become a creative endeavour—and like any creative endeavour, when it succeeds it does not result in simply helping people to acquire more knowledge, or even a lifelong interest in a particular subject: it can alter the way they see things. A study in the same field as this argues that the solution to improving achievement of adult learners lies in fostering creativity in the learning process through creative curriculum, teaching and instructional techniques (Ogunleye, 2002).

Creativity and curriculum design is about having and using your imagination and perhaps helping others to use theirs. Baillie and Dewulf (1999) offer their own definition of creativity as 'shared imaginations'. This is useful for the curriculum context, as designs then provide the vehicle for sharing the imaginations of the designers and provide prompts for creative action by the teachers who deliver the curriculum.

It is important for the course tutors on the postgraduate certificate to agree on definitions and think through a number of important questions at the outset of the curriculum design process. What do we mean by creativity? What qualities does the experience of creativity have? What conditions are necessary for it to arise? Can we learn to be creative? Remaining under the influence of the paradigm shift, it is not to be a case of 'how do we want the lecturers on the postgraduate certificate in Third Level Learning and Teaching to show their creativity individually and in groups', but rather 'how do they want to be creative?' Also, within the realms of the paradigm shift, is it possible to change students' and lecturers' conceptions of creative

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behaviour? Will there then be a conflict between creativity and critical rigour for the tutors, when the end of the module approaches, and an associated assessment vehicle needs to be in place? Taken further, how will we know that creativity has occurred, are there different degrees of it and how can it be evidenced?

Building on the work of Csikszentmihalyi (1997), Beattie (2000) concludes that creativity can and should be assessed, but that this must be with an appropriate methodology, in order to promote curriculum development in the teaching of creativity.

One of the many further questions that the area of creativity springs is why should higher education teachers be interested in creativity? The response that the course tutors wish these lecturers (who are students on this particular course) to explore centres on the fact that we live in a complicated and messy world in which work for most of our graduates is a continuous stream of 'problems' that have no simple or unique solutions. Being able to work creatively will, in turn, help their students survive and thrive in this world and help them lead more satisfying and meaningful lives.

The exploration of these questions will be based on reflection of the critical incidents that the LTC tutors undergo in the design process of the 'imaginative curriculum' for our context. Associated with this, there is a wish to incorporate the general principles of pedagogy that encourage creativity of process. The LTC tutors wish to foster 'creative learning' for these lecturers, based on setting up a learning environment that encourages the lecturers to see the essence as well as the detail of the subject which they are exploring, to formulate and solve problems, to see connections between diverse areas, and to take in and react to new ideas. Such a learning environment involves not only appropriate materials and assessment techniques, but also methods of learning that address the affective dimensions of creativity. The assessment criteria developed for the module also have an allowance for reward for creative thinking.

As stated, it will be vital for the course tutors to support, encourage and enhance the lecturers' creativity on the module. This is so they can feel that they have been given the requisite experiences and tools to replicate the evolution and fostering of creativity when they return to their own classrooms and their own students. The module will stress the importance of higher education, within the paradigm shift, to provide activity-driven learning experiences, enabling both lecturers and students to become more creative and more willing to challenge accepted ideas and conventions. Intrinsic to this idea, the lecturers on the module should discuss and debate how, paradoxically, much higher education tends to foster conformity, which can be counter-productive to creativity.

Creativity in the HE disciplines

There have been arguments put forward that in certain subject disciplines in higher education, lecturers are unclear about how to structure instruction to enhance creativity and encourage creative thinking on the part of their students (Baker *et al.*,

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2002). Too little of our teaching in higher education is focused on nurturing students' ability to think in creative ways. The educational experiences of many young people conditions them to take a passive approach to the learning process. Creativity, as has been established, is difficult to define, and is rarely articulated as an explicit learning objective in the academic curriculum. This literature on creativity has made two assumptions: that we can learn about creativity by focusing on the work of others and that creativity is the preserve of the arts rather than the concern of the curriculum as a whole (Craft *et al.*, 2001). For a complete picture to emerge, it will be necessary to look at the practice, pedagogy and policy concerned with creative education in its entirety.

However, examples from various subject disciples in higher education abound, which can be drawn upon for the lecturers in the module. Recently, an online forum on creativity in engineering education has been formed to discuss how creativity can be implemented in an engineering educational context and how interdisciplinary creative experiences can be encouraged in the engineering curriculum. Added to these are the standard questions on assessment and enhancement of creativity (Baillie & Dewulf, 2002).

On a larger scale, the study by Niu and Sternberg (2001) of Chinese and American students' rated creativity of artworks seems to support their hypothesis that an independent self-oriented culture is more encouraging of the development of artistic creativity than is an interdependent self-oriented culture.

Fostering creativity in HE

Again linking to the work of Csikszentmihalyi, research into the environment that nurtures creativity states that it can occur when individuals feel free from pressure, safe and positive (Claxton, 1998); this is important for the climate established for the postgraduate certificate module. If the recommendations from the literature are followed (West, 2000), the curriculum design groups will be creative primarily when their task is sufficiently interesting, motivating and challenging and when the group feels safe to its members. Diversity in these groups is necessary to ensure there is sufficient difference and richness of input to encourage creative and innovative outputs; in their case the product will be the design and development of a real-life creative, imaginative curriculum in higher education.

The module will also enable lecturers to explore creativity in all its 'how-to' forms: how to break through barriers, generate ideas, identify opportunities, make judgements, experiment, use trial and error. All of this is exercising creativity because, as human beings, we are creative beings. When we do not create, we do not learn and grow.

There are a number of different aspects to the ways in which the lecturers on the module can design a curriculum. Personal innovation as a creative act: the innovation does not need to be something that is universally recognized as being new, but something that is new to individuals; it is about the transfer and adaptation of ideas from one context to another. Creativity as working at and across the boundaries of

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acceptability in specific contexts: this involves taking risks. Creativity as designs that promote the holistic idea of 'graduateness': the capacity to connect and to do things with what has been learnt and to utilize this knowledge to learn in other situations. Professional development is important in terms of employers looking for creative innovators and problem-solvers. Creativity as making sense out of complexity: that is, working with multiple, often conflicting factors, pressures, interests and constraints.

From his study McGoldrick (2002) advocates that there are certain conditions that stimulate creativity in the design process, namely, existing knowledge of the discipline, enthusiasm for the discipline, an interest in students and their learning and a problem/issue. The curriculum design group project that the lecturers undertake in the module is based on these conditions.

As established in the literature, enabling students to be creative is a worthwhile and desirable goal for higher education and any programme can be vivified to make it more favourable to fostering creativity. As far back as 1993, Torrance asserted that creativity is one of the essential elements that will enable higher education institutions to reform. Building on this, Freire and Macedo stated that 'in part the exclusion of social, cultural and political dimensions from learning and practices gives rise to an ideology of cultural reproduction that produces teachers who are de-skilled and acritical, without much independent thought' (Freire & Macedo, 1998, p. 71). If higher education is to promote creativity it must reflect upon the realities of its students, discuss how these realities can be utilized to enhance creativity, as well as engage in activities that encourage creativity.

Anderson (1990) further explored the importance of creativity in higher education by advocating that the college experience should include an opportunity to discover one's potential and achieve higher levels of creative expression. It can be argued that the extent to which this happens depends on curriculum design and the commitment of academic staff to nurture this development in the classroom.

Inherent problems to be overcome

However, if one examines Csikszentmihalyi's (1997) requirements for creativity, there are many ways for a person to fail the creativity test that have little to do with the individual or their work. If the person's field does not have accepted rules or norms, or if the rules are highly inflexible, it is difficult to be deemed creative. They will have very limited scope to be creative in their jobs. Also, there can be the case where a person's work is not seen by the judges/gatekeepers who select the new ideas: da Vinci's creativity is evident because we can see it; we do not recognize the creativity of those individuals to whose work we are not exposed. A third scenario exists whereby the judges do not consider an individual's work novel and worthy. This is highly subjective and time-sensitive. The creative work of one generation may be considered quaint or passé by the next, only to be rediscovered and praised as creative by a future set of judges. When people speak of someone as being 'creative', they are generally referring to that person's originality. The person is always doing something

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new or has a certain flare about them. Originality is an important part of creativity but it does not automatically make someone creative.

The contextual study of creativity also considers motivation. Basically, creative people are intrinsically motivated—they love what they do. If someone dislikes teaching, for example, it is highly unlikely that the individual will be creative in that domain.

Thus far in this article, creativity has been considered as a mental trait and as a systematic process. Cognitive psychologists have tried to understand creativity as a mental process. This approach recognizes that there is more to creativity than divergent thinking. The intent is to illuminate how creative ideas are generated and to explore the mental processes and structures that underlie creative thinking. Sternberg and Williams (1996) define creative work as the balance between three abilities that can be learned and practised: synthetic, analytical and practical ability.

Currently, as part of the orientation of the creativity concept, this article will be an exploration of the notion of creativity in higher education by relating the research in the LTC to the theories on creativity of the British psychoanalyst, Winnicott (1996). His argument suggests that there should be an allowance for the development of an experience of adult serious play in an integrated model of higher education.

Further emphasis will be given to learning and teaching provision which explores and critically evaluates the body of knowledge about creativity, its theoretical underpinning and the development of creative capacity. The work being undertaken in the Creativity Centre, which has been operating in close collaboration with the University of Huddersfield (Fryer & Thompson, 2000) is useful for this further emphasis.

In summary, the main impetus behind the module in the postgraduate certificate, then, is to use aspects of cognitive psychology to help lecturers explore how a higher education curriculum might be designed to help students find and enjoy their own creative sparks. In order to do this, it is also vital to understand how the lecturers on the module view creativity and, to supplement this, it will draw on the wider scholarly and research literature. It is aimed to use a model of the creative thinking process for the purpose of serving as a cognitive map for lecturers as they seek to unleash the creative potential of their students. Every higher education teacher will interpret the idea of creativity in their own way. McGoldrick (2002), in his interviews with higher education teachers, illuminated their views on what is meant by creativity. They included the following: newness, excitement, useful, pleasurable, moral, hard work.

The challenge for my professional practice and my own thinking, then, is how to introduce creative experiences into this module, with associated activities, and validate the creative process.

Impact on professional practice: creativity in the imaginative curriculum

I like to think of higher education teachers as being creative people, with imagination and creativity underpinning values to their work. Designing the curriculum is a major topic in this module. Using creativity and imagination in designing the curriculum is even more important. It is a specialized topic, and some of its language is particular.

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It is an extensive topic, reaching all parts of educational practice. It is a contested topic, which challenges the deepest of personal values. It is an essential topic, important for both new and established staff, as the participants on our module. And it is an interconnected topic, where change in one area has (sometimes a surprising) impact in other areas. It is also a topic that has moral worth. From a personal perspective, I feel I owe it to the lecturers, and in turn to their students, to help them develop and appreciate their own creativity for a world of complex learning in which creativity is highly valued.

It will be meaningful for the lecturers to be aware of the power of creativity and understand that creative achievements depend on single-minded immersion. This is based on the idea that people can outdo themselves when undertaking a favoured activity: termed 'flow' by Mihaly Csikszentmihalyi (1997), and argued by Goleman (1996) as emotional intelligence at its best. Having the sociability of working in groups for the curriculum design project within the module will allow a collective mix of ideas to form and develop between disciplines for the lecturers.

Evaluation of the module's impact

From October to December 2003, qualitative research was conducted to measure retrospectively the impact of change in teaching practice for lecturers who have graduated from the postgraduate certificate in Third Level Learning and Teaching over a period extending from 2000–3. Included in this qualitative questionnaire were specific questions asking about the impact that the creativity aspects of the module were having on the participant's teaching practice. Essentially it was to establish the difference that the completed course, and its emphasis on creativity in the curriculum, has made on these lecturers' professional practice. Thus, a questionnaire allows the course participants to include their opinions and judgments about the impact and change that the course has had on their teaching practice.

Currently, there are forty-five graduates from the course. Arguably, this is quite small, as yet, in terms of numbers of participants on the course to have an impact on the ground within the institution, which has a full-time quota of academic staff of just over one thousand. However, I also believe that moral purpose needs an engine, and that engine is individual, skilled agents pushing for changes around them, intersecting with other like-minded individuals and groups to form the critical mass necessary to bring about continuous improvements (Fullan, 1993, p. 40).

A quantitative section was included in the questionnaire: a likert scale was used to measure if the participants found the creativity aspects of the module were having a strong impact on their practice, a small impact, no impact or were still undecided. From the 45 responses, 23 stated it was having a strong impact, 10 stated it was having a small impact and 12 were still undecided.

Throughout the next academic year (2004–5), I intend conducting a series of focus groups with the participants to take these results further and probe deeper into what specific outcomes they can see occurring in their practice as a result of having successfully completed the course.

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Conclusion: enablishing learning spaces

A future aspect of this research on creativity is to provide within the module, literally, a 'learning space' for use by the lecturers and the course tutors in where individuals or groups can review their own learning about any issue within the module that they wish. It will draw on the principles of 'open space technology' (Owen, 1997), and show how lecturers, when given their own space, come up with creative solutions for their own professional development.

It will be important to consider how we can help further accommodate flexible and emergent learning (as opposed to teaching) opportunities within the institution which, in the past, has been more used to standardized programmes. The paradigm shift from teaching to learning is pivotal in this. It is argued that creativity in the curriculum design process has a major role to play in this paradigm shift.

The psychological research on creativity has been very useful for revealing that people are creative in varying degrees and styles. Past research has demonstrated that an individual's level of creative potential can be increased through formal training. Current research is examining the relationship between cognitive style and creative behavior. This new frontier in creativity research has already produced a number of positive outcomes for both individuals and institutions interested in creativity (Gryskiewicz, 1982). One of the most beneficial outcomes is the awareness that individuals will manifest their creativity in different ways, and that all styles of creativity are valuable.

This research will be of enormous benefit for my own thinking in the area and on my current and future professional practice.

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