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The Social Construction and Psychological Assessment of Creativity

HANS WESTMEYER

The paper underlines the conceptual disunity present in the field of creativity research and introduces a relational concept of creativity of products that stresses the socially defined character of this aspect of creativity. The proposed definition implies that creativity cannot be conceived as an ability of persons, as a characteristic of thinking processes, or as a neuronal function. Referring to the well-known investment theory of creativity and to the so-called creativity tests, the paper explicates additional consequences of a socially construed creativity concept and considers the status of empirical research on creativity within a social constructionist framework.

Conceptual Disunity

Whoever tries to immerse themselves in the field of creativity is struck by the high degree of disunity present in this field in practically every respect. Take, for example, the summary survey of the cognitive characteristics that are ascribed to so-called creative persons by different researchers in the field—a survey prepared by Tardif and Sternberg (1988, p. 434) in the closing paper of the well-known book on the nature of creativity (Sternberg, 1988). There does not seem to be very much agreement between the different authors concerning the ingredients, characteristics, or resources of creativity. This situation is, of course, not unique to the field of creativity; it can be met in many other areas of the social sciences.

The disunity concerning the cognitive characteristics of so-called creative persons is, at least in part, due to differences in the definition of the creativity concept and to fundamentally divergent strategies in creativity research. If we follow Jaccard and Dittus (1990) in their differentiation of three approaches to empirical tests of psychological theory, namely the strictly idiographic approach, the aggregate-nomothetic approach, and the normative-nomothetic approach, we find that all three approaches are pursued in creativity research. Jaccard and Dittus (1990) characterize the three approaches in the following way: “The strictly idiographic approach is concerned with making statements about the relationships among variables for a single individual” (p. 314). The aggregate-nomothetic approach “is strongly tied to the idiographic approach and retains the individual as the focal unit of analysis.

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Table 1. Gruber's three fundamental propositions of creativity research (Gruber & Davis, 1988, p. 245)

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1. Each creative person is a unique configuration.
 2. The most challenging task of creativity research is to invent means of describing and explaining each unique configuration.
 3. A theory of creativity that chooses to look only at common features of creative people is probably missing the main point of each life and evading the main responsibility of research on creativity.
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However, it goes beyond strict idiography by summarizing across individual analyses, making generalizations regarding groups of individuals" (p. 316). The normative-nomothetic approach "focuses ... on multiple individuals or groups of individuals.... Essential to this approach is the fact that inferences are made regarding the behavior of an individual *relative* to other individuals, that is, within a relative frame of reference" (p. 316).

A prominent example of the strictly idiographic approach is the work of Howard Gruber. His three fundamental propositions of creativity research could be read as a credo of the strictly idiographic approach (see Table 1).

Whereas the aggregate-nomothetic approach can be seen as complementary to the strictly idiographic one, this is not the case for the normative-nomothetic approach, which is characterized by a different kind of intended application (e.g., aspects of groups, samples, or populations of persons), and relies on different methods and strategies to investigate its subject. I cannot go into this more closely, but let me mention that the investment theory of creativity proposed by Sternberg and Lubart (1991) is a good example of the normative-nomothetic approach. In the course of testing their theory, the authors refer to samples of persons, compute correlation coefficients across individuals, and use corresponding multiple regression methods (Sternberg & Lubart, 1991, pp. 18–20).

The absence of an agreed upon definition or explication of the creativity concept seems to be, in my opinion, one reason for the abundance of entities that are called 'creative' in the field of creativity research. In Table 2, entities to which the term 'creative' is applied in the abstracts of the contributions to the 5th ECHA Conference (Spiel, 1996) are listed.

More than creative imagination is called for if one tries to accept the challenge to construct a theory that is able to deal with all these different entities. My attempt to reduce this impressive number of substantives by categorizing them on the basis of the widely accepted four aspects of the problem of creativity was actually not very successful and shall not be reported here. But these four aspects are important for the argument I would like to put forward in my paper.

On the Four Aspects of Creativity

Most researchers in the field follow Mooney (1963) in differentiating between four aspects of the problem of creativity:

Table 2. Entities to which the term “Creative” is applied
(source: *Abstracts of the 5th ECHA Conference; Spiel, 1996*)

Creative ability (Voiskounsky <i>et al.</i> , Averina)
Creative accomplishment (Nährer)
Creative activity (Benischke, Montgomery)
Creative adolescent (Piirto)
Creative approach (Landau)
Creative arts (Vialle)
Creative aspect (Spiel <i>et al.</i>) of therapy
Creative atmosphere (Landau)
Creative behaviour (Urban, Glück, Hartmann, Cretu)
Creative development (Vladimir <i>et al.</i> , Clark)
Creative effect (Scholda <i>et al.</i>)
Creative English (Pychova)
Creative feature (Uusikylä)
Creative flow (Fankhauser)
Creative home (Landau)
Creative imagination (Limont)
Creative individual (Uusikylä)
Creative method (Knourkova)
Creative musician (Cretu)
Creative path (Hopfgartner) of teaching and learning
Creative people (Cramond)
Creative performance (Lubart)
Creative personality (Landau, Vladimir <i>et al.</i>)
Creative potential (Petrulyte)
Creative problem-solving skill (Hopfgartner)
Creative process (Fankhauser)
Creative product (Montgomery)
Creative production (Cretu)
Creative profession (Glück)
Creative response (Montgomery)
Creative student (Southern <i>et al.</i>)
Creative talent (Shavinina, Uusikylä)
Creative task (Petsche)
Creative teacher (Mönks, Petrulyte)
Creative therapy (Spiel <i>et al.</i>)
Creative thinking (Petsche, Matyushkina, Spahn, Heinla)
Creative way (Wills)
Creative work (Glück, Lubart)
Creative writer (Piirto)
Creative writing (Fischer)

- (1) the *environment* in which the creation comes about, that is, the *creative environment* (or climate or situation or *place*);
- (2) the *product* of creating, that is, the *creative product*;
- (3) the *process* of creating, that is, the *creative process*; and
- (4) the *person* who is creative, that is, the *creative person*.

What are the relations between these four aspects (cf. Taylor, 1988, p. 101)? Are

Table 3. A simplified definition of creativity of products

x is a *creative* product of person y if and only if there are

- (1) a domain d ,
- (2) a rater or judge r ,
- (3) a (social) context c ,
- (4) and an instant t such that
- (5) x is a product which belongs to the domain d ,
- (6) r is an expert in the domain d within the social context c ,
- (7) and the product x of person y is evaluated by the rater r in the context c at time t as *creative*,
i.e., $CEF(x,y,r,c,t) = \textit{creative}$, with CEF as the creativity evaluation function.

they independent of each other? Of course not! But of what kind are the dependencies? Are they conceptual or empirical ones? Would we, for example, call an environment creative if it has not stimulated the creation of any creative product? Or, would we call a person creative if he has not produced any creative product? And, would we call a process creative if it has not led to any creative product? From my point of view, the answer has to be: No! in each case. The creative product is first, even if I set myself in contrast to Weisberg (1993, p. 5) who has a completely different rank order—I suppose because he is primarily interested in the creative thinking process.

I think, due to conceptual reasons, the existence of creative products is a *necessary* condition for the ascription or attribution of creativity to the respective persons, environments, and/or processes. I will leave open here the corresponding question of whether the existence of creative products is also a *sufficient* condition for the ascription of creativity to the other three instances. I do not think it to be, but this is not important for my argument.

The property of being a necessary condition already underlines the prominent position of the creative product. But what makes a product a creative one? An evaluation, of course! As is widely acknowledged in creativity research, evaluations depend upon the interaction of the product, the individuals doing the evaluating, and the context in which the evaluation is done. Consequently, the result of an evaluation of a product cannot be attributed to the product alone, i.e. it cannot be conceived as a property or a feature of the product. It has to be construed, instead, as an element of an at least ternary relation.

Towards a Definition of the Concept of Creativity

Let me try to make this more precise (see Table 3): a simplified definition of creativity of products has to consider, apart from the product x and the person y who produced x , the domain of production d (e.g., science, art, music, etc.), a rater or judge r who evaluates the product, a social context c in which the evaluation takes place at a certain point in time t .

x has to be a product belonging to the domain d ; r has to be an expert in the

Table 4. A selection of answers to the question “what is creativity?”

<p>Creativity is the ability to produce work that is both novel and appropriate. (Lubart, 1994, and many others before him)</p> <p><i>Creativity</i> A term used ... to refer to mental processes that lead to solutions, ideas, conceptualizations, artistic forms, theories or products that are unique and novel. (Reber, 1985)</p> <p>Creativity is an extremely complex thinking process. (Pöppel, 1996) ... creative thinking as the process of sensing difficulties, problems, gaps in information, missing elements, something askew; making guesses and formulating hypotheses about these deficiencies; evaluating and testing theses, guesses and hypotheses; possibly revising and retesting them; and finally communicating the results. (Torrance, 1988, called his <i>research definition</i>)</p> <p>Creation yields products with three characteristic properties:</p> <ol style="list-style-type: none"> 1. They are novel for the individual who creates it. 2. They reflect the individual's freedom of choice and accordingly are not constructed by rote or calculation, but by a nondeterministic process. 3. The choice is made from among options specified by criteria. <p>(Johnson-Laird, 1988)</p> <p><i>Proposition 1:</i> Creativity is a form of leadership in that it entails personal influence.</p> <p><i>Proposition 2:</i> Creativity involves the participation of chance processes both in the origination of new ideas and in the social acceptance of those ideas by others. (Simonton, 1988)</p> <p>Creativity is one of the most complex neuronal functions. (Pöppel, 1996)</p>	<hr/>
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domain d , acknowledged within the social context c ; and the evaluation of the product x of person y by the rater r in the context c at time t has to lead to the result: This product is *creative* or a *creative* one.

This definition shows that creativity of a product is ascribed or attributed by raters or judges, that the expertise of these persons relative to certain domains of production are important, that the social context matters, and that the time may make a *difference*. Creativity as expressed by the creativity evaluation function (*CEF*) refers not to a *property* of products, but to a certain *relation* between the elements of the domain of the function, and the product is only one of these elements.

Implications of the Definition

This has consequences for the other entities to which the term ‘creative’ is applied. If creativity of a product is a necessary condition for the ascription of creativity to the respective process, person and environment, the relational character of the creativity concept with regard to products implies a likewise relational character of the creativity concepts with regard to persons, processes and environments. Conse-

quently, there is good reason to be doubtful about the usual answers to the question “What is creativity?” (see Table 4).

If my analysis is right, creativity *cannot* be conceived as an ability of persons, as a characteristic of thinking processes, or as a neuronal function. If there is a reality in creativity at all, it lies in the *relationships* between the person said to be creative, the raters or judges who are entitled to ascribe the label, and the social context in which the evaluation takes place. “Realities and relationships” is, by the way, the title of a recent book of Ken Gergen (1994), who is one of the most prominent social constructionists. Gergen makes a very similar point for other psychological constructs that are usually misinterpreted as properties of persons or cognitive processes inside persons. Unfortunately, creativity is not among the topics dealt with in his book. But there is another person at least as prominent in creativity research as Gergen in the social-constructionist movement—I mean Mihaly Csikszentmihalyi (1991, p. 34), who defends a similar position with regard to creativity in his commentary on the investment theory of Sternberg and Lubart (1991).

This theory (see also Sternberg & Lubart, 1996) can easily get into trouble if the socially defined or constructed character of the concept of creativity is not explicitly considered in the theoretical assumptions. Sternberg and Lubart shortly summarize their theory in the following way:

Six resources (intelligence, knowledge, intellectual style, personality, motivation, environment) converge in an interactive manner to generate various domain-relevant creative abilities, which are partially overlapping (neither wholly domain specific nor wholly domain general). Some of these abilities, in turn, generate a portfolio of creative projects. These projects yield products that are in turn evaluated, sometimes multiply. We can measure creativity only through these evaluations, which can fluctuate with the person doing the evaluations and with the spatiotemporal context of the evaluations. (cf. Figure 1 in Sternberg & Lubart, 1991, p. 5)

If we have a set of persons whose various resources have been measured by appropriate assessment procedures, and these persons have produced in pursuing the so-called creative-performance tasks a number of products, the theory pretends to predict the creativity of the products.

Referring to our former definition of the creativity of products (Table 3), what the theory actually predicts and explains is the *rating* of a product or a set of products of a person by a rater or a set of raters at a certain point in time. To make the situation even more complex, there could be different sets of raters that come to different results when evaluating the same products of a certain person at a certain point in time. The theory does not prescribe anything concerning the selection procedure for raters. If the rank order of the persons with regard to the creativity of their products changes with changes in the set of raters doing the evaluation, we have the apparently paradoxical situation that the substantive assumptions of the investment theory of creativity are, at the same time, confirmed and refuted by data referring to the same persons and the same products.

Socially Versus Psychologically Defined Concepts

For a better understanding of this situation, let me put it into a broader context. From a social-constructionist point of view, this situation is no surprise, but is to be expected from the beginning. And we could have been well aware of this situation at least since Jerry Wiggins' (1973) differentiation between *socially* and *psychologically defined concepts*.

As examples of socially defined concepts, he mainly considered criteria as they are predicted in psychological assessment, and as exemplary of psychologically defined concepts he referred to the psychological predictors on which the prediction is based. With regard to the investment theory, the creativity of products would be a socially defined concept, whereas the six resources would count as psychologically defined concepts.

But the important question in this context is: what are the differences between socially and psychologically defined concepts? My answer is the following (cf. Westmeyer, 1995):

Socially defined concepts are construed by groups of persons that are authorized to do so and endowed with the required definitional power by certain social institutions or organisations of an international, national, public, or private provenance. The resulting constructions are considered to be valid until further revision within the sphere of influence of these institutions or organisations.

Psychologically defined concepts are, in the first place, constructions of single psychological scientists or of small groups of such persons. Some of these constructions are gaining ground within more extended parts of the scientific community, whereas others do not succeed that well. Universal commitment and acceptance are not within reach of any of these constructions, since, in a democratically constituted scientific community, principally everyone is entitled to her or his own constructions.

That is, both kinds of concepts are socially construed. The difference is more in the groups of persons who are entitled, within a certain social context, to do the construction. In the case of psychologically defined concepts, these groups are part of our own scientific community, whereas, in the case of socially defined concepts in the sense of Wiggins, these groups are mostly from outside our discipline.

Applying this differentiation to the relational concept of creativity proposed in this paper, it is obvious that this concept is a *psychologically* defined one. One of the four aspects of this concept, i.e., the creativity of products, is psychologically defined in Table 3. The other three aspects, i.e., the creativity of environments, processes and persons, could be psychologically defined building upon the definition in Table 3.

On the So-called Creativity Tests

Especially in creativity research, the difference between socially and psychologically defined concepts is often ignored. Think, for example, of the so-called creativity

tests designed to assess creativity. They explicitly presuppose that creativity is a *property* of persons. The relational character of the creativity concept is disguised by the usual procedure to fix the evaluation of the test performance once and for all in the test manual. And this is usually done by only one person, namely the test author. The underlying strategy is quite clear: a construct that is socially defined outside of psychology is *reinterpreted* as a construct that can be psychologically defined, and the construction is done by one psychologist or a small group of psychologists, which is in most cases identical with the test authors, without any concern of the vicissitudes of the social context.

If we acknowledge the social construction or constitution of the creativity concept not as a property of persons, but as a many-placed relation, the so-called creativity tests (e.g., Torrance, 1974) do *not* assess creativity as such, but, at best, certain resources of creativity as they are dealt with, for example, in the repeatedly mentioned investment theory of creativity of Sternberg and Lubart. I do not think that it is a bold conjecture if I claim that it is impossible to construct creativity tests. This statement is a direct implication of the relational and social character of the creativity concept I have tried to defend so far.

This does not devalue the so-called creativity tests. Although misnamed, they may have their function in assessing important resources of creativity. But that is an empirical question to be answered in appropriate validity studies which are more the exception than the rule. In the manual of the most recent German creativity test for preschool and school children (Krampen *et al.*, 1996), for example, not even one *appropriate* validity study is mentioned. I would call a validity study 'appropriate', if the socially defined concept of creativity is considered when selecting a validity criterion.

The social-constructionist approach to creativity sheds light upon another very popular aspect of the conception of creativity as a property of persons. If we declare creativity to be an ability that is, for example, normally or, in certain respects, non-normally distributed within the total population, we do not announce a new discovery that was unknown before, even if many people are pleased to hear that there is, apparently, some amount of creativity in all of us. We only draw the consequences of our psychological construction of creativity as a quantitative concept that comes in degrees and is applicable even to persons who never produced a product that is called creative by the relevant persons or groups of persons that are in charge of evaluating the creativity of products in the respective domain.

The statement "Everyone is creative or can be creative" is not a discovery, but a structural implication of the respective construction of the concept of creativity. And if the creativity in everyone is measured by so-called creativity tests or anything comparable, the same critical arguments against the psychological reinterpretation of the socially defined concept of creativity in general, and against creativity tests in particular likewise apply.

The social construction of the creativity concept does not, in principle, exclude the application of the concept to everyday environments or to certain classes of persons, e.g., children. But without any products that satisfy the requirements of the definition in Table 3, an application of the creativity concept could not be justified.

On the Empirical Content of Psychological Theories

What remains to be discussed is, from a realist point of view, the apparently paradoxical situation that a psychological theory of creativity as, for example, the investment theory may be confirmed and refuted with regard to data of the same persons and the same performance products. This brings me to the last issue I would like to address in this paper: the status of empirical research in the social constructionist framework or, to be more precise, the empirical content of psychological theories.

I have to confess that constructionists are not very explicit as far as this topic is concerned. Some of their comments give the impression that not only our concepts, but everything is socially defined, negotiated and constructed; others, for example, the well known developmental psychologist Sandra Scarr (1985), adhere to the so-called scientific methods that are said to be able to differentiate between what is scientifically acceptable and what is only the result of idiosyncratic thinking, uneducated guess, and uncontrolled observation.

My answer to the question about the empirical content of psychological theories is heavily influenced by my structuralist view of psychological theories (cf. Westmeyer, 1989, 1992), but I think it is completely within the limits of a constructionist approach (cf. Westmeyer, 1995, p. 750). My answer is this:

- (1) A psychological theory, considered by itself, has no determinate or determinable empirical content.
- (2) An empirical content can be attributed to a psychological theory only if it has been embedded into a methodological environment which comprises all the methodical constructions to which one has to refer in the course of testing the theory.
- (3) Even then, it is impossible to specify a definite empirical content. The reason is that there are usually, among the respective methodical constructions, several options to choose from more or less freely. And the choices made may affect the empirical corroboration of the theory.
- (4) Not before decisions are made with regard to any point in question is it reasonable to ask about the empirical content of the set of theory elements, which arises out of the embedding of the psychological theory into a certain methodological environment. And only then does one stand to get more than a noncommittal answer.
- (5) The answer is, of course, dependent on the decisions (conventions, constructions, definitions) made earlier. If other decisions are made, the set of theory elements linked to each other will change, although the psychological theory as the reference point remains the same.
- (6) A research strategy that optimally matches this point of view could be called a *monotheory-multimethod* analysis.

To illustrate this conception, I would like to refer again to the investment theory of creativity of Sternberg and Lubart (1991). To determine the empirical content

Table 5. Some questions to be answered in the course of testing the investment theory of creativity

Which assessment procedures shall be used to measure the different cognitive, affective-conative, and environmental resources?
That is, how to assess the theoretically relevant aspects of intelligence, knowledge, intellectual style, personality, motivation, and environment?
If more than one measure is used for the assessment of a resource, how to combine different results per resource?
Which evaluation procedures shall be used to decide on the creativity of the products of the examinees' work on the performance tasks?
Which persons or kinds of persons can be called upon to do the creativity rating?
If the rating is done by more than one person, how to combine different values per product?
Which statistical procedures shall be used to test the substantive assumptions of the theory?
If, for example, a multiple regression approach is chosen, how to decide upon the empirical corroboration of the theoretical assumptions concerning the interaction of different resources?
What counts as a very good, a good, or a just sufficient fit?
etc.

of this theory, it is necessary to embed the theory into a comprehensive theory net which comprises, for example, assessment structures, i.e., the products of the application of certain methods or procedures to assess the different kinds of resources and the evaluations of the so-called creative products. The problem is that the theory to be tested does not unequivocally determine what assessment procedures are to be applied and how this has to be done. A lot of questions of a substantive and methodical nature are left open by the theory, questions which can be answered in quite different ways, of course with unforeseeable consequences for the empirical corroboration of the theory. Table 5 lists some of these questions to be answered in the course of testing the theory.

All of these listed questions and, perhaps, many others are relevant to the investment theory and its reference to its intended applications. Only if all of these questions have been answered and the respective decisions made is this part of the theory net, or, to be more precise, the methodical environment of the theory, sufficiently determined to expect a reasonable answer to the question about the empirical content of the investment theory.

From a social constructionist point of view (cf. Westmeyer, 1996) it is important to notice that most of the decisions to be made cannot be based on the results of empirical research, but have to refer to social conventions, definitions and constructions. It is regrettable that we can find hardly anything about these imponderables in our textbooks of psychology in which the isolated presentation of psychological theories still prevail, which have, taken separately, no empirical content at all.

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