

Original Contributions - Originalbeiträge

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What, If Anything, Is Linguistic Creativity?

1. Introduction

The term "creativity" comes from Latin, and means "give birth to" or "bring into existence" (cf. Cicero *Omnes res, quas et creat natura, et tuetur* "All things, which nature makes as well as protects"). However, the act of creation was not available to humans; only gods and nature could create something or someone. The idea that man can be creative is a fairly recent one, and probably not much older than a thousand years. Yet, the term is now both widespread and ill-defined. Does it refer to the creation of something new, valuable, or worthwhile? The combination of hitherto unconnected elements? The filling or using of already existing patterns in skillful ways? Is there creation out of nothing, ex nihilo, as the romanticist would have it? What did Ezra Pound mean with his smashing 1934 slogan: Make it new?

In a very influential study, Dean Simonton (2012) defined creativity as originality times appropriateness (cf. Thomas Hoffmann, 2018). So, ideas need to be both new (original) and appropriate in a given situation to be truly "creative". Singing "Happy Birthday" at somebody's birthday party is highly appropriate, but hardly original, and therefore not creative. Singing Pharell Williams's song "Happy" at the dying bed of a beloved person is highly original, but hardly appropriate, and so it is not creative either, according to this definition. When Vincenzo Bellini and Felice Romani created *Norma* as their masterpiece in the novel combination of "gothic romanticism" with elements of classic tragedy, this innovation was both highly original and very appropriate, and so can be considered an act of creativity, according to Simonton.

The present paper is concerned with creativity in language and linguistics. Can language users be creative, and if so, how? How do we model linguistic creativity in our theoretical models? At first sight, language as a rule-based system should not allow for any innovations, for any creativity in the common sense. After all, computers and their programs cannot be creative either. Yet, we see what can only be termed "acts of creation in speakers", in both everyday and poetic language. Speakers produce new words and new metaphors apparently without thinking,

and poets create works such as *Finegan's Wake*. How is this possible? How do hearers and readers deal with the unexpected and surprising input?

2. Defining Linguistic Creativity

Today, the term "creativity" has wide currency in linguistics. Noam Chomsky was not the first one to discuss the concept, but maybe one of the most widely read:

"Within traditional linguistic theory, furthermore, it was clearly understood that one of the qualities that all languages have in common is their "creative" aspect. Thus an essential property of language is that it provides the means for expressing indefinitely many thoughts and for reacting appropriately in an indefinite range of new situations." (Chomsky, 1965, p. 6)

"Language is a process of free creation; its laws and principles are fixed, but the manner in which the principles of generation are used is free and infinitely varied. Even the interpretation and use of words involves a process of free creation." (Chomsky, 2003, p. 402)

At first sight, it would appear as if Chomsky is using the term "creativity" in its everyday sense. Yet, when you look more closely at this theoretical framework as a whole, he is not. Chomsky's theory of generative grammar is, essentially, a computational theory. At its core, it claims that all and only the grammatical sentences of a language are generated from a finite set of rules. This is a very interesting and powerful claim in itself, and it certainly propelled linguistic research into the 20th and even 21st centuries. However, it is important to understand that this is a computational theory of language and mind. There are certain rules, and these rules generate our sentences. There is no systematic deviation from the rules, there cannot be. Any piece of linguistic data that cannot be accounted for by this finite set of rules either leads to a reformulation of those very rules or must be considered an aberration or a matter of performance, not of competence. Chomsky's creativity, then, means that we can generate an infinite number of new sentences according to these rules. However, is this truly creative in the sense that we create something original, unexpected?

Sampson (2016) clearly says no. He distinguishes between what he calls E-creativity and F-creativity:

"Let me describe activities which characteristically produce examples drawn from a fixed and known (even if infinitely large) range as 'F-creative', and activities which characteristically produce examples that enlarge our understanding of the range of possible products of the activity as 'E-creative'. (F chosen as standing for 'fixed', E for 'enlarging' or 'extending')." (Sampson, 2016, p. 19)

In other words, if Chomskian ideal speaker-listeners produce "novel" (hitherto unheard, unproduced) sentences, they are merely being F-creative. In other words, according to Sampson, they are executing calculus: once we have learned multiplication, is computing 4.792 × 5.306 as 25.426.352 creative? It is an impressive cognitive skill, for sure, but does it create something new? Does the ability to follow a limited set of mathematical rules, such as addition, subtraction, multiplication, and division mean that we use these creatively to come up with new "products"? Certainly, it is not in the everyday sense of the word. Similarly, generating even the most complex sentence out of a finite set of rules can only be F-creative. In this sense, F-creativity also equals roughly what morphologists have sometimes described as productivity (Laurie Bauer, 2001), i.e. the creation of new words on the basis of existing patterns, e.g. when the suffix -er is used to create new words such as mansplainer "somebody who mansplains." Haspelmath (2002, p. 100) therefore also distinguishes between (mostly unintentional, subconscious) productivity and intentional, creative neologisms that do not follow any major, productive pattern, such as va-jay-jay "vagina."

E-creative, on the other hand, is what we see when somebody breaks the rules and does something that is not part of the finite set of rules. This could be intentional or even unintentional. Examples outside language might include Jackson Pollock, Pablo Picasso, John Cage, James Joyce, or Hugo Ball (among many others). They all (intentionally) created artifacts that were entirely unpredictable by the rules of the system. Spraying paint on a canvas, sketching people in 3-D, no sound for 4 minutes and 33 seconds, and the beginning of *Finegans Wake* or the whole of *Die Karawane* were absolutely unpredictable for people at the time. These probably come closest to what Sampson considers E-creativity, i.e. creativity that enlarges or expands our system(s). Is there such a thing in language or even in everyday language? Where do new forms come from?

3. Where Do Linguistic Innovations Come From?

There appear to be a number of potential sources for linguistic innovations. These innovations may be deliberate and intentional, and others are more random and unintentional. From the perspective of language change, the crucial question is whether these spread or not. As innovations, they are certainly interesting from an individual perspective.

Such individual sources are malapropisms, malaphors, inappropriate expressions, and failed etymologies. Shakespeare has a number of examples such as (1), but they also occur in present-day English natural speech (2). Example (3) illustrates a malaphor (i.e. a failed metaphor).

- (1) Bottom: Thisbe, the flowers of odious savours sweet. (William Shakespeare, *A Midsummer Night's Dream*, III.i.76)
- (2) Republicans understand the importance of bondage between a mother and child (reportedly said by Dan Quale)
- (3) We'll burn that bridge when we come to it. (https://malaphors.com/2013/01/17/well-burn-that-bridge-when-we-come-to-it/, last accessed 18 Feb 2019)

These are not only tremendously funny but also interesting creative innovations. Yet, they may be original but not appropriate. So, it remains a matter of chance whether these catch on (on the basis of sociocultural mechanisms). In any case, these are not even semi-conscious creations.

Another, very similar source is dialect and language contact, i.e. when speakers borrow from other languages. One extreme case was reported in 1996 (borrowed English words are underlined):

(4) Mein Leben ist eine giving-story. Ich habe verstanden, dass man contemporary sein muss, das future-Denken haben muss. Meine Idee war, die handtailored-Geschichte mit neuen Technologien zu verbinden. Und für den Erfolg war mein coordinated concept entscheidend, die Idee, dass man viele Teile einer collection miteinander combinen kann. Aber die audience hat das alles von Anfang an auch supported. Der problembewusste Mensch von heute kann diese Sachen, diese refined Qualitäten mit spirit eben auch appreciaten. Allerdings geht unser voice auch auf bestimmte Zielgruppen. Wer ladyisches will, searcht nicht bei Jil Sander. Man muss Sinn haben für das effortless, das magic meines Stils. (Jil Sander, Frankfurter Allgemeine Zeitung 22 March 1996, quoted in Der Spiegel 1 April 1996)

In example (3), 17 words out 117 (about 15%) are borrowed from English. One might call this a borderline case between conscious borrowing (e.g. when Germans began to use the words *cool* or *fuck* – both of which seemed to be deliberate borrowings) and code-switching, which follows different and complex factors (e.g. lack of lexicon, processing difficulties, sociocultural factors, acts of identity, and so much more; cf. Barbara Bullock & Almeida Torribio, 2009). In other words, borrowing and code-switches are also not the clear-cut examples of linguistic (E-)creativity. In the following section, we will therefore look at three other, language system internal processes or mechanisms that might be more helpful in our quest for E-creativity in language: snow cloning, coercion, and aberration.

"Snow clone" as a term was probably introduced in 2004 on the language Log blog (http://itre.cis.upenn.edu/~myl/languagelog/archives/000350.html). It refers to a cliché pattern or frame that gives rise to many slightly different variations

of this pattern (such as "If Eskimos have 40 words for snow, Germans have 40 words for beer"; "If Eskimos have 40 words for snow, Italians have 40 words for pasta"; "gray is the new black"; and "linguistics is the new nuclear physics"). In almost all of these cases, we see a basic formal, syntactic pattern (e.g., "If X have Y words for Z, then A have B words for C" or "N is the new P" associated with a particular, sometimes even supra-propositional, meaning, such as irony or sarcasm). In most cases, probably, speakers simply use snowclones with the existing pattern and fill the available, variable slots with a new material in order to be witty or funny. Yet, some other speakers appear to be more creative and either modify the form side in combining hitherto incompatible elements (e.g. "Riesling is the Kenny G. of the wine world", Tony Veale (2012: 60-67) or be shifting the meaning to a fundamentally new domain. The snowclone "He's not the sharpest tool in the shed" is used to signify "He is not very intelligent"; today, we find other snowclones, based on this pattern, such as "He is not the hottest marshmallow in the fire," which signifies "He is not (sexually) very attractive." Apparently, there seems to be some sort of gradient between the "regular" and entirely predictable use of snowclones at the one end, and the most unexpected and creative uses, which tamer with meaning, form, or both, at the other end. However, even the most extreme cases do not seem to be E-creative. They more or less follow given patterns of form or they revert to some higher level more abstract meaning such as "x is not the y-est in the z," where the domain can usually be derived from a metaphorical interpretation of the superlative adjective y (see Pia Börgerding, Marie-Christine Benen & Alexander Bergs, under review). In short, the extreme cases of snowcloning might come close to E-creativity, but at least at the first sight, they do not seem to qualify.

The second phenomenon at issue here is mismatch/coercion (see Adele Goldberg, 1995; Ray Jackendoff, 1997; Elaine Francis & Laura Michaelis, 2003). Mismatch essentially means that speakers combine elements, that, at least theoretically, should not be compatible or combinable. This at first sounds like a rare phenomenon, but it is actually quite common, and most speaker/hearers do not even notice it, as example (5) illustrates.

(5) The next day I actually began the book. (COCA 2002; Illumination and night glare)

The problem here is that the verb "begin" cannot take a nominal complement; it should be complemented by a verb, e.g. "begin reading" or "begin writing". In this particular case, the reading and interpretation is actually indeterminate without context. In other words, the speaker could begin to anything you can do to or with a book. It is only when we look at the context that we realize that "began writing" should be the intended meaning (6).

(6) Nearly all of the happenings in the book spring directly from the characters. During the space of this book each person is shown in his strongest and most typical actions. Of course it must be understood that none of these personal characteristics are told in the didactic manner in which they are set down here. They are implied in one successive scene after another and it is only at the end, when the sum of these implications is considered, that the real characters are understood in all of their deeper aspects. The next day I actually began the book: "In the town there were two mutes and they were always together." For a year or so I worked steadily and when my teacher, Sylvia Chatfield Bates, with whom I had studied writing for a semester at N.Y.U. wrote me that Houghton Mifflin was conducting a contest for a first novel, I wrote a detailed working outline of "The Mute" and submitted it to them along with the 100 or so pages I had already completed.

This meaningful interpretation is coerced out of the mismatch by contextual clues and the particular construction; in other words, "coercion is the resolution of mismatch" (Debra Ziegeler, 2007, p. 992). Mismatch and coercion lie at the heart of apparently creative linguistic processes such as metaphor (7) and metonymy (8).

- (7) The man is a lion. (COCA 1991; USA Today)
- (8) I don't wear leather or wool or silk. (COCA 2008; Dateline NBC)

Obviously, there is also mismatch here. A man cannot be a lion, and you cannot wear any materials (only clothing made out of these materials). Example (7) constitutes a textbook example of metaphor (the X is Y type), and example (8) illustrates metonymy of the "material for object" type. Note that both examples are not taken from poetic language. While metaphor and metonymy are often found in fine literature, they are also part and parcel of everyday language (see Max Black, 1954; George Lakoff & Mark Johnson, 1980). Mismatch and coercion can also be found in particular grammatical constructions, such as the "way construction" (9) and the "resultative construction" (10).

- (9) I guess you can say he slept his way to the top. (COCA 2014; Don't look for me)
- (10) [...] he laughed himself off his chair (COCA 2010; RedBook)

As with examples (5)–(8), there is some mismatch here. "Sleep" is an intransitive verb and should not occur together with a nominal complement and a prepositional phrase; similarly, "laugh" is also intransitive but is complemented here by a reflexive pronoun and an adverbial phrase. Note that both are perfectly interpretable: (9) means that he strategically used sexual relations to reach the top of the social hierarchy, and (10) means that he laughed so hard that he fell off the

chair. However, this meaning is not in the words themselves; even more so as the words should not be combinable. These interpretations are coerced out of the mismatching elements by the constructions in which they occur: [Sub V posspro way PP] and [Sub V reflpro PP/NP]. These constructions as such are also quite frequent and common and hardly ever get noticed as exceptional (just like the metaphor and metonymy examples, which also usually go unnoticed).

However, are mismatch and coercion F- or E-creative? Do they produce something completely new, or do they follow some rules? Numerous studies in psycholinguistics and neurolinguistics have shown that there seems to be a difference between coerced constructions such as (11) and nonsense constructions such as (12).

- (11) The man began the book.
- (12) The man awakened the book.

Kuperberg et al. (2010) point out that while (11) and (12) both evoke an N400 effect (which, roughly speaking, indicates unexpected words in a sentence), only (12) also provoked a strong late P600 effect (which usually indicates syntactic errors that require additional cognitive effort to resolve). In a similar vein, Pylkkänen & McElree (2007) show that coercion (but not anomaly) leads to increased activity in the anterior midline field, generated by midline source in the ventromedial prefrontal cortex. The latter, by the way, "has commonly been implicated for social cognition and theory of mind, raising the intriguing possibility that the mechanisms responsible for noncompositional interpretation may not be 'linguistic' per se" (Pylkkännen & McElree, 2007, p. 1917). In any case, there seems to be evidence from these domains that mismatch and coercion do not mean "anything goes," but that there seems to be a fundamental difference between structural mismatch and nonsense/anomaly.

This is further underlined by studies in construction grammar (such as Goldberg 1995, 2006), where we find evidence that "Constructions are combined freely to form actual expressions as long as they can be construed as not being in conflict" (Goldberg, 2006, p. 27) and that "coercion is not a purely pragmatic process; rather, it is only licensed by particular constructions in the language" (Goldberg, 1995, p. 159). In other words, there are particular constraints in the construction (and features in the single elements) that specify which kind of element can be combined with another specific element. So you can more easily "laugh yourself off the chair" than "read yourself off the chair." Again, this means that mismatch and coercion do not seem to constitute E-creativity in the strict sense, although

¹ Note that the latter is not entirely impossible but that this requires a lot more cognitive effort to be interpretable. In this sense, I would classify this as aberration rather than mismatch.

they can come close. Novel metaphor or the innovative use of constructional patterns such as the way construction certainly qualifies for the everyday sense of creativity and borders on E-creativity in the strict sense.

Let us now come to the third and last phenomenon. For lack of a better term, the term for this will be aberration. It signifies certain uses that apparently do not conform to any (obvious) linguistic rule and that are not subject to any (obvious) constraints. In other words, these new structures appear to be absolutely unpredictable. Some examples would be sentence final *not* (13), the N-*much* construction (14), or the use of *fun* as adjective (15), to name but a few.

- (13) After the health plan disaster, I feel completely comfortable. Not. (COCA 2013, St Louis)
- (14) Sir ... are you a citizen of the United States? Hey! Racist much? (The TV Corpus, Desperate Housewives 2010)
- (15) Anyway, fun night, Felix. (The TV Corpus, The Odd Couple 2017)

All these are not sanctioned by any rules, nor are they strictly and clearly predictable by any independent (cognitive, universal) principles or pathways of language change. They qualify as straightforward innovations, just as neologisms such as yahoo or xerox. However, as with neologisms, it is also clear that even these "extreme" innovations are subject to the basic constraints of the individual linguistic system, such as English phonotactics. A morphological innovation such as *rktzpw* [rktzpw] has little chances of survival. Similarly, the spontaneous invention of an inessive marker in English probably will not be accepted by the speech community. However, these boundaries are fairly wide, and they can be crossed. In most cases, this would mean that the innovation is not successful and does not spread. However, in some rare cases, it does. An example from morphology is probably phteven,2 and syntactic example can be found in (13) or (14), where the quantifier follows the head noun - an otherwise extremely rare ordering in English and not occurs in isolation without any syntactic context. All in all, innovations of this kind, which clearly qualify as E-creativity, are very rare in daily language. As speakers love to play with language every now and then (following Martin Haspelmath's principle of extravagance - "Talk in such a way that you are noticed" (Haspelmath, 1999, p. 1005; cf. Rudi Keller, 1994), these creative innovations do occur.

² Phteven "is a nickname given to a dog named Tuna, a chihuahua-dachshund mix with a prominent overbite and lower jaw dysfunction, who became an internet sensation after his owner launched an Instagram feed in November 2011. The nickname comes from an unrelated image of a receipt with the customer's name misspelled as 'Phteven,' or 'Steven' when spoken with a lisp" (https://knowyourmeme.com/memes/phteventuna-the-dog). Phteven became a widespread internet meme, despite the fact that [ft] is an extremely rare initial consonant cluster in English.

Similar linguistic innovations can of course also be found in fine literature. Certain forms of poetic practices explicitly deal with the breaking of conventions. Some examples would include James Joyce's *Finegan's Wake* from 1939, the poetry of the Dada movement of the early 20th century, and of E. E. Cummings, as well as parts of Lewis Caroll's *Alice in Wonderland* (1865). Here, the authors deliberately break with conventions and rules and create completely new – and prima facie uninterpretable – utterances. However, once these are seen in their cultural context, these works of art do become interpretable (just like John Cage's 4'33" can be interpreted as a work of art in a particular context). However, these have to be seen as special instances, which are not based on the same cognitive principles and mechanisms such as the examples from natural, daily language discussed earlier. Their interpretation clearly lies outside the realm of linguistics as such.

4. From F- to E-Creativity

From what has been said so far, it becomes clear that creativity in language is a complex topic and that the strict distinction between F- and E-creativity in Sampson's sense is probably more a practical than a theoretical issue. In other words, while it seems theoretically absolutely plausible to distinguish the two types, differentiating between the two on the basis of real-life utterances is a lot more difficult. Most of the examples discussed earlier illustrated F-creativity, i.e. linguistic productivity, albeit to different degrees. While most of the snowclones are closer to F-creativity, many cases of mismatch and coercion probably lean more toward E-creativity. Aberrations come closest to E-creativity and, when they actually break even the basic rules of the system, are the only examples of real E-creativity. These acts of innovations are extremely rare, however, and can mostly be found in literary language and perhaps the language of advertising (where extravagance is particularly important).

So, from a practical point of view, what we ultimately end up with is not so much a clear dichotomy between F-creativity and E-creativity but rather a continuum between these two poles, as shown in Fig. 1.

Future studies will have to further explore the role of creativity in the linguistic system and human cognition. One of the open empirical questions, for example, is whether cognitive flexibility in any sense correlates with linguistic flexibility, i.e. linguistic creativity. What exactly is this relationship like? Is cognitive flexibility

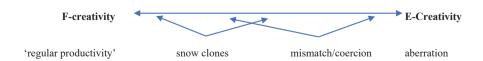


Fig. 1 From F-creativity to E-creativity

a prerequisite or a consequence, or can we expect mutual scaffolding between the two? Should we distinguish between active (speaker) creativity and passive (hearer) creativity? Again, how do these two interact? All these will have to remain problems for future research within cognitive linguistics, cognitive science, and cognitive science, brought together under the umbrella of neurohumanities.

Summary

This paper investigates the nature of creativity in language and linguistics. Following Sampson (2016), it distinguishes between F-creativity (which roughly equals linguistic productivity) and E-creativity (which leads to new and unexpected innovations). These two notions of creativity are discussed on the basis of examples from three different domains: snow cloning, mismatch/coercion, and aberration. It is shown that pure E-creativity may only be found in the case of aberration. Both snow cloning and mismatch/coercion are examples for F-creativity, but to varying degrees. As a consequence, it is suggested that in practice, F- and E-creativity actually form a cline, rather than a dichotomy.

Keywords: Cognitive linguistics, creativity, coercion, snow clones, metaphor, linguistic rules, cognitive poetics.

Was ist sprachliche Kreativität?

Zusammenfassung

Dieser Beitrag untersucht die Rolle der Kreativität in der Sprache und Sprachwissenschaft. In Anlehnung an Sampson (2016) wird unterschieden zwischen F-Kreativität (die in etwa sprachlicher Produktivität entspricht) und E-Kreativität (die etwas tatsächliches neues und innovatives schafft). Diese beiden Typen werden auf der Grundlage verschiedener Beispiele in drei Bereichen diskutiert: 'snow cloning', 'mismatch/coercion' und 'aberration'. Es kann gezeigt werden, dass reine E-Kreativität lediglich bei der 'aberration' festzustellen ist. Sowohl 'snow cloning' als auch 'mismatch/coercion' sind lediglich Beispiele für F-Kreativität, wenn auch in unterschiedlichem Grade. In der Schlussfolge wird daher vorgeschlagen, F- und E-Kreativität in der Praxis als Gradienten und nicht als Dichotomie zu betrachten.

Schlüsselwörter: Kognitive Linguistik, Kreativität, Coercion, snowclones, Metaphern, sprachliche Regeln, kognitive Poetik.

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