Productivity is a general term in [linguistics](https://www.thoughtco.com/what-is-linguistics-1691012) referring to the limitless ability to use [language](https://www.thoughtco.com/what-is-a-language-1691218)—any [natural language](https://www.thoughtco.com/what-is-a-natural-language-1691422)—to say new things. It is also known as open-endedness or creativity.

The term productivity is also applied in a narrower sense to particular forms or constructions (such as [affixes](https://www.thoughtco.com/what-is-affix-grammar-1689071)) that can be used to produce new instances of the same type. In this sense, productivity is most commonly discussed in connection with [word-formation](https://www.thoughtco.com/word-formation-1692501).

## Examples and Observations

"Humans are continually creating new expressions and novel [utterances](https://www.thoughtco.com/utterance-speech-1692576) by manipulating their linguistic resources to describe new objects and situations. This property is described as productivity (or 'creativity' or 'open-endedness') and it is linked to the fact that the potential number of utterances in any human language is infinite.

"The [communication](https://www.thoughtco.com/what-is-communication-1689877) systems of other creatures do not appear to have this type of flexibility. Cicadas have four signals to choose from and vervet monkeys have 36 vocal calls. Nor does it seem possible for creatures to produce new signals to communicate novel experiences or events....

"This limiting factor of animal communication is described in terms of fixed reference. Each signal in the system is fixed as relating to a particular object or occasion. Among the vervet monkey's repertoire, there is one danger signal CHUTTER, which is used when a snake is around, and another RRAUP, used when an eagle is spotted nearby. These signals are fixed in terms of their reference and cannot be manipulated."

– George Yule, The Study of Language, 3rd ed. Cambridge University Press, 2006

## Open-Endedness and Duality of Patterning

"[M]ost of the utterances you produce and hear every day have very likely never before been produced by anybody. Consider a few examples: A large tear rolled down the little pink dragon's nose; Peanut butter is a poor substitute for putty; Luxembourg has declared war on New Zealand; Shakespeare wrote his plays in Swahili, and they were translated into English by his African bodyguards. You have no difficulty in understanding these—even if you don't believe all of them....

"This limitless ability to produce and understand totally new utterances is called open-endedness, and it should be perfectly clear to you that, without it, our languages and indeed our lives would be unrecognizably different from what they are. Perhaps no other feature of language so dramatically illustrates the vast, unbridgeable gulf separating human language from the signaling systems of all other creatures.

"The importance of open-endedness has been realized by linguists for decades; the term was coined by the American linguist Charles Hockett in 1960, though others have sometimes preferred the labels productivity or creativity."

– R.L. Trask, Language, and Linguistics: The Key Concepts, 2nd ed., edited by Peter Stockwell. Routledge, 2007

"[I]n human language the meaningful messages (both sentences and words) are infinite in variety by virtue of the fact that words are produced from a system of combining a finite set of meaningless units. Linguists since Hockett in the 1960s have described this hallmark property of language as [duality of patterning](https://www.thoughtco.com/duality-of-patterning-language-1690412)."

– Dani Byrd and Toben H. Mintz, Discovering Speech, Words, and Mind. Wiley-Blackwell, 2010

## Freedom From Stimulus Control

"The ability to respond freely is another key aspect of creativity: no human is obliged to make a fixed response to any situation. People can say whatever they want, or even stay silent...Having a limitless range of possible responses is known (technically) as 'freedom from stimulus control.' "

– Jean Aitchison, The Word Weavers: Newshounds and Wordsmiths. Cambridge University Press, 2007

## Productive, Nonproductive, and Semiproductive Forms and Patterns

"A pattern is productiveif it is repeatedly used in language to produce further instances of the same type (e.g. the [past-tense](https://www.thoughtco.com/past-tense-simple-past-1691596) affix -ed in [English](https://www.thoughtco.com/what-is-the-english-language-1690652) is productive, in that any new [verb](https://www.thoughtco.com/verb-definition-1692592) will be automatically assigned this past-tense form). Non-productive (or unproductive) patterns lack any such potential; e.g. the change from mouse to mice is not a productive [plural](https://www.thoughtco.com/plural-grammar-1691638) formation—new nouns would not adopt it, but would use instead the productive -s-ending pattern. Semi-productive forms are those where there is a limited or occasional creativity, as when a [prefix](https://www.thoughtco.com/prefix-grammar-1691661) such as un- is sometimes, but not universally, applied to words to form their opposites, e.g. happy → unhappy, but not sad → \*unsad."

– David Crystal, Dictionary of Linguistics and Phonetics, 6th ed. Blackwell, 2008)

"[T]he plural affix 's' which is added onto the [base](https://www.thoughtco.com/what-is-base-word-forms-1689161) form of [nouns](https://www.thoughtco.com/noun-in-grammar-1691442) is productive because any new noun which is adopted into English will employ it, whereas the change from foot to feet is unproductive because it represents a fossilised plural form limited to a small set of nouns."

– Geoffrey Finch, Linguistic Terms, and Concepts. Palgrave Macmillan, 2000

"The productivity of a pattern can change. Until recently, the [adverb](https://www.thoughtco.com/what-is-adverb-1689070)-forming [suffix](https://www.thoughtco.com/suffix-grammar-1692159) -wise was unproductive and confined to a handful of cases such as likewise, clockwise, lengthwise and otherwise. But today it has become highly productive, and we frequently coin new words like healthwise, moneywise, clothes wise and romancewise (as in How are you getting on romancewise?)."