



Why terms matter to biological theories: the term “origin” as used by Darwin

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Everybody now understands what Darwin meant when he published his epoch-making book *On the Origin of Species by Means of Natural Selection, or the Preservation of favoured Races in the Struggle for life* (1859). He, of course, meant evolution, i.e., the transformation of animals and plants, chance modifications, and speciation. Nevertheless, the very notion of “evolution” has aroused as much confusion as it has debate: some historians tend to suggest that Darwin intentionally avoided using the term, since it was supposedly full of progressive or embryological connotations; others claim that Darwin constantly employed the word (after all, they argue, the word “evolved” is the last one of the book). This disagreement regarding the supposed absence or presence of the term “evolution” is more than a sterile academic exercise: what is at stake in this debate is the very meaning of Darwin’s theory, as well as its relation to the contingent notions of “progress” and “development”.

Darwin’s allegedly crystal-clear title is in fact perhaps the most commented part of the book. Ever since Darwin’s book first appeared, readers claimed that the book did not match its title. St. John Mivart suggested that the right question was not the “origin” but the “genesis” of species (1871); Edward Drinker Cope promoted the “origin of genera” and the “origin of the fittest” (1887); Theodor Eimer took up the question of the origin of species, but emphasized inheritance of acquired characters instead of natural selection (1888). Modern advocates of Darwin have hardly been more supportive. If T. Dobzhansky named his book *Genetics and the Origin of Species* and the equally Darwinian E. Mayr dubbed his *Systematics and the Origin of Species*, they both were suggesting that Darwin had not covered the central question of the origin of species (see, for instance, the works of Ernst Mayr, Daniel Dennett or Elliott Sober).

Perceived discrepancies between the book and its title require us to examine the meaning of the word “origin”. An examination of its translation helps us to understand what is at stake. In French, for instance, *Origin* was easily translated, or rather transliterated into *Origine*, and French readers thought that the meaning of the term was clear enough. But Pierre Flourens, then *secrétaire perpétuel* of the Academy of Sciences in Paris, painted a different picture in his 1864 review of the book: “*The title advertises a treatise on the origin of species. I open the book, and I don’t find a single word about the origin of species. The book deals only with their transformation.*” As is often the case in translation, the French “*origine*” is a “false friend” and does not convey the meaning of the English “*origin*”. Clearly enough, for Flourens, “*origine*” referred to what lies at the beginning of time. As Flourens phrased it: “*In natural history, there are only two possible origins : either ‘spontaneous generation’, or the hand of God. Choisissez!*”. The *origin* in Darwin’s title does not refer to what he described as a handful of prototypes into which life was “*originally breathed*”.

What Darwin actually meant by *origin*, however, is closer to what we might call *origination*. This meaning was not lost on all French readers, in spite of the illusion created by the French “*origine*”. For instance, Émile Gautier, in his *Darwinisme Social* (1880), quoted Darwin’s “*revolutionary title*” as: “*Production des espèces à la faveur de la sélection naturelle ou à la faveur de la conservation des races, accomplies dans la lutte pour l’existence*”. Unlike many of his peers, Gautier understood that the “*origin*” is

1. “Choose”.

not the “*source*” but the “*production*”. Gautier was not alone in understanding this. The translator of a book by the German philosopher Eduard von Hartmann (1877) also referred to Darwin’s “*Formation des espèces*”, accurately rendering Darwin’s notion of *origin*.

French translators were not the only ones to grapple with the notion of “origin”, however. A similar hesitation can be documented in German. Darwin’s first German translator, H. G. Bronn, used “*Entstehung*” (process of origination) for “origin”; but Darwin’s second German translator, Victor Carus, suggested that the title should be changed from “*Entstehung*” into “*Ursprung*” (primitive source)—a suggestion that Darwin eventually rejected as being a potential cause of trouble with readers (Hoquet 2009). One can easily see here that if Darwin had chosen a different title, or if translators had paid attention to the meaning of “origin”, some profound misreadings of Darwin’s theory would have been avoided.

In fact, far from clear-cut, each word in Darwin’s title was a cause of incomprehension for German translators, and the source of many debates. Almost every word of the English title was susceptible of at least two different interpretations (Table 1).

TABLE 1. Major terms in the title of Darwin’s book and their various German renderings.

Darwin 1859	<i>origin</i>	<i>species</i>	<i>natural selection</i>	<i>favoured</i>	<i>struggle for life</i>
Bronn 1860	<i>Entstehung</i>	<i>Arten</i>	<i>natürliche Züchtung</i>	<i>vervollkommneten</i>	<i>Kampfe um’s Dasein</i>
Seidlitz 1871	<i>Ursprung</i>	<i>Arten</i>	<i>Naturlauslese</i>	<i>begünstigteren</i>	<i>Lebenskampf</i>

Translators only agreed on one word: species was universally translated as “*Arten*”. But this does not mean that “*Arten*” is a good choice for the notion of species as Darwin intended it. Indeed, “*Arten*” is a very bad equivalent, as it suggests “*kinds*” or “*types*”.

Another terminological issue with Darwin’s *Origin* deals with the famous “tree of life”. A close reading of the chapter 4 of the *Origin* demonstrates that Darwin did not consider that his diagram, strictly speaking, was a “tree”. The simile of the tree is only present in the final paragraph of the text and Darwin suggests that it is a popular and rhetorical device that can be explained through his theory. While acknowledging that “*this simile largely speaks the truth*” (1859: 129), Darwin never explicitly endorses it. Therefore, why call the famous illustration a “tree”, when Darwin never really did so himself? In fact, Darwin should be distinguished from a thinker like Haeckel: the English naturalist’s diagram depicts a general mechanism at work, and not a genealogical tree putting several taxonomic groups into relation. The “*Origin*” is a process of origination, and this is what the diagram shows.

Hesitation between terms shows how contradictory interpretations of Darwin’s project are easily found and grounded in Darwin’s text itself. Subsequent translations not only overshadowed the original meaning with new connotations foreign to the original; they also functioned like an optical prism, diffusing the original clarity of Darwin’s concept into a multiplicity of possible meanings and, as we have seen, into a plurality of possible Darwins.

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