

## THE ENGLISH OF AGRICULTURE: COMPOUNDS AND DERIVATIVES WITH 'CULTURE'

### ENGLISKI U POLJOPRIVREDI. SLOŽENICE I IZVEDENICE S RIJEČI "CULTURE"

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**Abstract:** *Agriculture* (whose name was attested for the first time between 1425 and 1475) has been developing from times immemorial. New agricultural branches have brought about new terms to designate them, from *horticulture* (attested ever since 1670-1680) and going on with *floriculture*, *arboriculture*, terms appeared during the 19<sup>th</sup> century, and with *mariculture*, *monoculture*, *polyculture*, and *citriculture*, terms appeared during the 20<sup>th</sup> century, to *permaculture* (a term that appeared sometime in the 1970s), or to *aeroculture*, *agrosilviculture*, *algaculture*, *animaliculture*, *boviculture*, *caniculture*, *heliculture*, *mosaiculture*, *multiculture*, *nutriculture*, *oleiculture*, *oligoculture*, *ostriculture*, *pecudiculture*, *plasticulture*, *spongiculture*, *terraculture* / *terriculture*, and *zooculture*, that still do not have a "birth certificate" (they are attested, but linguists cannot yet say for sure when they appeared for the first time). This means 300 years of linguistic creativity enhanced by the need to define new realities, and a relatively short inventory of nouns (designating both the agricultural branch and the agricultural 'agent'), adjectives, and adverbs – quite difficult to understand and learn by students in agriculture, particularly when it is about synonyms designating the same agricultural branch or about derivatives that follow no pattern discernible whatsoever.

**Sažetak:** Poljoprivreda (čiji naziv se pojavljuje prvi puta između 1415. i 1475.) se razvija od davnina. Nove poljoprivredne grane su rezultirale i uvođenjem posebnih termina za njihovo označavanje počevši od *horticulture* (pojavljuje se od 1670. – 1680.) zatim *floriculture*, *arboriculture*, terminima koji su se pojavili tijekom 19. stoljeća, potom *mariculture*, *monoculture*, *polyculture* i *citriculture*, terminima koji se javljaju u 20. st. do *permaculture* (termina koji se pojavljuje 1970-ih ) ili do *aeroculture*, *agrosilviculture*, *algaculture*, *animaliculture*, *boviculture*, *caniculture*, *heliculture*, *mosaiculture*, *multiculture*, *nutriculture*, *oleiculture*, *oligoculture*, *ostriculture*, *pecudiculture*, *plasticulture*, *spongiculture*, *terraculture* / *terriculture* i *zooculture*, koji još uvijek nemaju "rodni list" (oni su potvrđeni, ali lingvisti još uvijek ne mogu reći sa sigurnošću kada su se prvi puta pojavili). To znači 300 godina lingvističkog stvaralaštva i potrebe za definiranjem novih realnosti i relativno kratkog popisa imenica (koje označavaju poljoprivrednu granu i vršitelja – agenta ), pridjeva i priloga koje studenti poljoprivrede teško razumiju i uče. Ovo se posebno odnosi na sinonime koji označavaju istu poljoprivrednu granu ili na izvedenice kada se nalaze iza strukture koja se ne može razaznati.

**Key words:** English, agriculture, compounds, derivatives, culture

**Ključne riječi:** engleski, poljoprivreda, složenicе, izvedenice, culture

#### INTRODUCTION

The structural transformation of agriculture in the 19<sup>th</sup> and 20<sup>th</sup> centuries should be approached in the context of sociological theory, with emphasis given to key historical transitions, changing social relations of production, and state policy. Such emphases could provide a framework for understanding the historical roots and future prospects for the socioeconomic problems confronting contemporary agriculture. As mechanical tillage machinery and methods revolutionized agriculture in the 19<sup>th</sup> and 20<sup>th</sup> centuries, the field became the major unit of production. This can also be said about "linguistic products" such as

English compounds and derivatives containing *culture* and belonging to the field of plant and animal production.

#### MATERIALS AND METHOD

We have inventoried, with the help of one of the best English language comprehensive dictionaries [2] and of the Internet [1], a number of 39 terms [+ action] (i.e., denoting **farming** and the different agricultural branches) appeared during the last three centuries. We have taken into account only compounds made up of combining forms (“bound forms used in conjunction with another linguistic element in the formation of a word”, [3]) and of the noun *culture* [+ action]. We have ignored compounds such as *anaculture*, *biopyoculture*, *capilliculture*, *contraculture*, *coproculture*, *cyberculture*, *domiculture*, *feticulture*, *hemoculture*, *hirudiniculture*, *homiculture*, *infanticulture*, *interculture*, *menticulture*, *microculture*, *psychoculture*, *puericulture*, *pyoculture*, *seroculture*, *subculture*, *superculture*, *urbiculture*, or *vacciniculture*, that have nothing to do with the practice of agriculture, and compounds such as *pond culture*, *oyster-culture*, *potlatch culture*, or *seaweed culture*, made up of two nouns.

#### RESULTS AND DISCUSSION

There are, in the contemporary English of agriculture, 39 compounds with *culture* [+ action] (the figures between brackets indicate the time the compound appeared, while the underlined nouns are synonyms for the compounds with *culture*): *aeroculture* [-] ‘a method of growing plants without soil by suspending them above sprays that constantly moisten the roots with water and nutrients; *aeroponics*, *geoponics*, *hydroponics*’, *agriculture* [1425-1475] ‘the science, art, or occupation concerned with cultivating land, raising crops, and feeding, breeding, and raising livestock; the production of crops, livestock, or poultry; *agronomics*, *agronomy*, *farming*’, *agrosilviculture* [-] ‘the growing of crops and trees in the same units of land’, *algaculture* [-] ‘a form of aquaculture involving the farming of species of algae’, *animaliculture* [-] ‘the rearing of animals as a branch of industry’, *apiculture* [1860-1865] ‘beekeeping, especially on a commercial scale for the sale of honey’, *aquaculture* [1865-1870] ‘the cultivation of aquatic animals and plants, especially fish, shellfish, and seaweed, in natural or controlled marine or freshwater environments; *underwater agriculture*; *aquiculture*’, *aquiculture* [1865-1870] ‘hydroponics; *aquaculture*’, *arboriculture* [1820-1830] ‘the cultivation of trees and shrubs’, *aviculture* [1875-1880] ‘the rearing or keeping of birds’, *boviculture* [-] ‘cattle-rearing’, *caniculture* [-] ‘the breeding and rearing of dogs’, *citriculture* [1915-1920] ‘the cultivation of citrus fruits or products’, *electroculture* [-] ‘the use of electricity to grow crops’, *floriculture* [1815-1825] ‘the cultivation of flowers or flowering plants, especially for ornamental purposes’, *heliculture* [-] ‘the farming or raising of snails’, *horticulture* [1670-1680] ‘the cultivation of a garden, orchard, or nursery; the cultivation of flowers, fruits, vegetables, or ornamental plants; the science and art of cultivating such plants’, *mariculture* [1900-1905] ‘marine aquaculture; also *ocean farming*’; *monoculture* [1910-1915] ‘the use of land for growing only one type of crop; *monocropping*’, *mosaiculture* [-] ‘the cultivation of beds of gardens that consist of plants with small foliage and different colours, arranged to form a pattern resembling that of a carpet’, *multiculture* [-] ‘polyculture’, *nutriculture* [-] ‘plants growing in nutrient solutions with or without an inert medium; such as, gravel or sand to provide mechanical support; *hydroponics*’, *oleiculture* [-] ‘the production, processing, and marketing of olives’, *olericulture* [1885-1890] ‘1. The cultivation of pot-herbs or other esculent (edible) vegetables. 2. The processing and marketing of vegetables, as a branch of horticulture’, *oligoculture* [-] ‘the cultivation of a few crops or species’, *ostriculture* [-] ‘the artificial breeding of oysters for the market; *oyster-culture*’, *pecudiculture* [-] ‘1. Raising, or rearing, cattle. 2. Etymologically, from Latin *pecud-em* "a beast"; in plural, "cattle"

plus "culture". The word format is based on *agriculture*, *horticulture*, *floriculture*, etc. 3. The genetics, breeding, nutrition and housing of domesticated animals; *animal husbandry*; *zooculture*, *permaculture* [1970] 'a design system which aims to create sustainable habitats by following nature's patterns' *pisciculture* [1855-1860] 'the breeding, rearing, or transplantation of fish by artificial means', *plasticulture* [-] 'all kinds of plastic plant coverings: mulches, row coverings, high and low tunnels to plastic greenhouses', *polyculture* [1910-1915] 'the raising at the same time and place of more than one species of plant and animal; a place where this is done; *multiculture*', *seri(ci)culture* [1850-1855] 'the raising of silkworms for the production of raw silk', *silviculture* / *syviculture* [1875-1880] the cultivation of forest trees, *forestry*', *spongiculture* [-] 'the cultivation of sponges', *stirpiculture* [1865-1870] '1. The application of selective breeding laws to improve a species of plants or animals. 2. The production of pure races or stocks of animals by careful breeding', *terraculture* / *terriculture* [-] 'cultivation on the earth; agriculture', *viniculture* [1870-1875] 'the science or study of making wines', and *viticulture* [1870-1875] 'the culture or cultivation of grapevines, *grape-growing*; the study or science of grapes and their culture', *zooculture* [-] '1. The cultivation (breeding and care) of animals for food or for biodiversity in the wild, zoological gardens, etc. 2. The genetics, breeding, nutrition, and housing of domesticated animals; *animal husbandry*; also, *pecudiculture* or the raising, or rearing, of cattle'. To these 39 compounds with *culture* denoting farming practices (noun [+ action]), correspond nouns denoting the person practicing the different types of farming practices (noun [+agent]), adjectives, and adverbs. Among these 39 compounds, there are three couples of terms composed with *culture* [+ action]. The first one, *silviculture* / *syviculture*, is made up of two spelling variants of the same term, while the other two, *agriculturist* / *agriculturalist* and *viticulturist* / *viticulturer*, are the result of a different root and of the same suffix (*agriculturist* > *agriculture* and *agriculturalist* > *agricultural*) or of the same root and of different suffixes (*viticulturist* > *viticulture* and *viticulturer* > *viticulture*) in the process of derivation.

As far as the derivatives are concerned: of the 39 compounds with *culture* [+ action], 19 (49%) have corresponding adjectives: *agricultural*, *agrosilvicultural*, *apicultural*, *aquacultural*, *aquicultural*, *arboricultural*, *floricultural*, *horticultural*, *monocultural*, *multicultural*, *olericultural*, *ostreicultural*, *piscicultural*, *sericultural*, *silvicultural*, *stirpicultural*, *vinicultural*, *viticultural*, and *zoocultural*; of the 39 compounds with *culture* [+ action], 17 (44%) have corresponding nouns [+agent]: *agriculturist* / *agriculturalist* 'a farmer; an expert in agriculture', *apiculturist*, *aquaculturist*, *aquiculturist*, *arboriculturist*, *aviculturist*, *citriculturist*, *floriculturist*, *horticulturist*, *olericulturist*, *pisciculturist*, *polyculturist*, *sericulturist* / *sericulturalist*, *silviculturist*, *stirpiculturist*, *viniculturist*, and *viticulturist* / *viticulturer*; of the 39 compounds with *culture* [+ action], 5 (13%) have corresponding adverbs: *agriculturally*, *floriculturally*, *olericulturally*, *pisciculturally*, and *silviculturally*.

From the point of view of the completeness of the lexical series (i.e., of the existence of a noun [+ action], of a noun [+ agent], of an adjective, and of an adverb): 17 compounds with *culture* [+ action] (44%) have no corresponding derivative whatsoever (i.e., noun [+agent], adjective, and adverb): *aeroculture*, *algaculture*, *animaliculture*, *boviculture*, *caniculture*, *electroculture*, *heliculture*, *mariculture*, *mosaiculture*, *nutriculture*, *oleiculture*, *oligoculture*, *pecudiculture*, *permaculture*, *plasticulture*, *spongiculture*, and *terraculture* / *terriculture*; 9 compounds with *culture* [+ action] (23%) have the corresponding noun [+agent] and the corresponding adjective: *apiculture* (*apiculturist*, *apicultural*), *aquaculture* (*aquaculturist*, *aquacultural*), *aquiculture* (*aquiculturist*, *aquicultural*), *arboriculture* (*arboriculturist*, *arboricultural*), *horticulture* (*horticulturist*, *horticultural*), *sericulture* / *sericulture* (*sericulturist*/*sericulturalist*, *sericultural*), *stirpiculture* (*stirpiculturist*,

*stirpicultural*), *viniculture* (*viniculturist*, *vinicultural*), and *viticulture* (*viticulturist* / *viticulturer*, *viticultural*); only 5 compounds with *culture* [+ action] (13%) have all the derivatives (i.e., noun [+agent], adjective, adverb): *agriculture* (*agriculturist* / *agriculturalist*, *agricultural*, *agriculturally*), *floriculture* (*floriculturist*, *floricultural*, *floriculturally*), *olericulture* (*olericulturist*, *olericultural*, *olericulturally*), *pisciculture* (*pisciculturist*, *piscicultural*, *pisciculturally*), and *silviculture* / *syliculture* (*silviculturist*, *silvicultural*, *silviculturally*); 5 compounds with *culture* [+ action] (13%) have only the corresponding adjective: *agrosilviculture* (*agrosilvicultural*), *monoculture* (*monocultural*), *multiculture* (*multicultural*), *ostriculture* (*ostreicultural*), and *zooculture* (*zoocultural*); 3 compounds with *culture* [+ action] (8%) have only the corresponding noun [+agent]: *aviculture* (*aviculturist*), *citriculture* (*citriculturist*), and *polyculture* (*polyculturist*).

If there are 5 derivate adjectives and 3 derivate nouns [+ agent] from compounds with *culture* [+ action], there is no derivate adverb in the absence of the noun [+ agent] and of the adjective in the same lexical series. It is interesting to note that language dictionaries only give the meaning for *agriculturist*, the meaning of the rest of the derivatives being easy to understand. The number of adverbs derived from compounds with *culture* [+ action] is small compared to the corresponding nouns 'agent' and adjectives.

### CONCLUSIONS

The large numbers of adjectives (49%) and of nouns [+ agent] (44%) shows that for agriculturists, everything related to the farming practice and the farming practice in itself was more important than the way things are being done, such as expressed by adverbs (13%). Adverbs will appear with more analytic approaches, i.e. with the increase of a more scientific approach of agriculture on the whole and of farming practices in particular.

The large number of compounds with *culture* [+ action] (44%) having no corresponding derivative whatsoever speaks of the recentness of the basic nominal compound. The quite considerable number of compounds with *culture* [+ action] (23%) having the corresponding noun [+agent] and the corresponding adjective shows that this is an on-going process, as well as the rather small numbers of compounds with *culture* [+ action] (13%) having all the derivatives, of compounds with *culture* [+ action] (13%) having only the corresponding adjective, and of compounds with *culture* [+ action] (8%) having only the corresponding noun [+agent] shows that the derivational process is on-going: this means that we may expect to have, in the near future, all the rest of the derivatives due to the fact that the derivational pattern is quite simple.

In practice, students in agriculture and in fields closely related to agriculture use most of these unattested derivatives, as for them they come in the most natural way.

### LITERATURE

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