ETYMOLOGY AND CULTURAL SIGNIFICANCE OF THE TERM AGRICULTURE

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Septiembre 2020
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* Este documento contiene los resultados de un trabajo preliminar de investigación sobre las raíces lingüísticas y culturales, y uso actual de las palabras agricultura y cultura, en los idiomas principalmente europeos.

Palabras clave:
Agricultura, lingüística, cultura

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1. Introduction: What is agriculture, and what isn’t it?

The modern notion of agriculture is tremendous in scope, comprising the cultivation of plants and fungi, as well as the raising of livestock, poultry, and insects for five areas: food, feed, fiber, fuel, and raw materials. Of the five, only the first two provide for human nourishment [food (directly) and feed (indirectly)].

Hunting animals (terrestrial and avian) and gathering wild insects and food from plants and fungal sources is typically considered outside the realm of agriculture. Indeed, all humans survived solely from hunting and gathering until roughly 9000 BCE, the time when it is estimated that the first fields came under cultivation in various areas of the planet.
Fishing, which is essentially the hunting of marine life, also falls outside the scope of agriculture, as does the gathering of edible and usable fruits of the sea, such as shellfish and seaweed. The controlled cultivation of water-based life for human exploitation, such as tank-based shrimp farms and closed-net salmon farms in the sea is known as aquaculture, and while closely related to agriculture, is typically also left outside the formal definition.

Agriculture usually refers to human activities, although it is also observed in certain species of ant, termite and ambrosia beetle.

2. Proto-Indo-European roots

Agriculture is a modern English word that can be split into two parts: agri- and -culture. Both of these terms are present today in various forms throughout European languages, and both can trace their linguistic roots all the way back (thousands of years) to Proto-Indo-European (PIE). Believed to have been spoken between 4500 and 2500 BCE during the Late Neolithic to Early Bronze Age (though estimates vary by more than a thousand years), PIE is the linguistic reconstruction of the ancient common ancestor of the Indo-European languages. PIE is the most widely-studied reconstructed language; its modern-day descendants reach from Portuguese, English and Norwegian in Western Europe, all the way to India and modern-day Russia. The Arabic-speaking south side of the Mediterranean is believed to have descended from PIE.

Agri- originally comes from the PIE word *h₂éǵros* which referred to fields.
-culture came from *kʷel-*, which meant to turn end-over-end, as in turning over soil.

3. “Agri-“ and the 5 zones of ancient times

PIE’s *h₂éǵros* evolved towards the southwest into ἀγρός (agrós) in ancient Greek, and in the east, अङ्ग्र (ájra) in Sanskrit. In north-central Europe, it became akraz in Proto Germanic, the linguistic reconstruction of the Germanic languages, spoken around the time of Christ. 700 years later in Old English, we find the term aeceor (modern English’s acre) which referred to a measure of land which a yoke of oxen could plough in a day.

In Latin, this root took on the form “ager”. While legend says that Romulus founded the city of Rome in 753 BCE, archaeological evidence of human activity in the area of modern-day Rome, Italy dates from much earlier - about 12,000 BCE (even before the advent of agriculture!) Regardless, the city of Rome retained a small size until the proclamation of the Republic in 510 BCE. At this moment, all the territory occupied by the Romans in the Latium vetus was proclaimed ager publicus, therefore the equivalent of the current state-owned land, managed by the state and which can be granted to private individuals. The Ager Romanus (literally, the Roman Field in English, and still called "l’Agro Romano" in modern Italian) is the geographical rural area (part plains, part hilly) that surrounds the city of Rome. Politically and historically, it has represented the area of influence of Rome’s municipal government. Some authors, at times, have applied this concept to the conquered lands, quite far from the city, but never those located outside of Italy.
According to Dionisio de Halicarnasso, the Ager Romanus was originally divided into three parts:

- **Ager regius**, assigned to the maintenance of the monarchy and to public worship.
- **Ager publicus**, which was used for animal grazing.
- **Ager privatus**, composed of lots distributed among the patrician families.

Apart from the bureaucratic nomenclature, when it came to actual farming and food production, the *ager* was seen as the area between the *hortus* and the *saltus* (with some overlap), in which the staple crops of grain, grapes, and olive could be cultivated. Such agro products were more resistant to transport compared to the delicate vegetables and soft fruits of the *hortus*.

**Fig 3: Spatial organization of land in ancient/medieval Europe (own elaboration)**

| Domus    | Church/ home.  
|----------|----------------|
|          | [Sanskrit: *dam*; Greek: *domos* (house)]
|          | {domestication, domain, dominion, dominate, dome} |
| Hortus   | Garden.  
|          | [Greek: *khórtos* (χόρτος); Sanskrit *गृह* (grha), Latin *hortus*, and Old English *geard* (English *yard*). {horticulture.}] |
| Ager     | The cultivated field. [see above] {agricultura, agronomy} |
| Saltus   | Grazing lands (wooded, semi-wooded, or grassy) upkept directly by animals, indirectly by humans. [jump; mountain pass; wooded area.] No current related English words found. |
| Sliva    | Forest {silviculture; sylvatic; sylvestral; sylvestrian; silvics, silviculous, names Silvia and Sylvester} |

Today, the term *hortus* survives in various European languages in such forms as *horticulture* (EN, FR) and *horticultura* (ES, PT, IT). Horticulture, defined by Merriam Webster as the science and art of growing fruits, vegetables, flowers, or ornamental plants, typically excludes grains and oils. If practiced in a home garden for domestic consumption, horticultural activity is often simply referred
to as *gardening* in English; indeed, the translation of “horticulture” in modern German is Gartenkultur or Gartenbau. When horticulture reaches commercial and industrial levels, such as the greenhouses of El Ejido de Almería, Andalucía (Spain), or Westland (Netherlands), it falls certainly within the domain of *agriculture*; indeed *industrial agriculture*.

The saltus is the least studied of the five zones, and its linguistic roots have only made it into modern times as the term *leap or jump* in some Romance languages (“saltar” in Spanish for example.) As a first approach, the saltus generally referred to meadows, steppes, or barren heaths, as well as some wetlands where cattle are grazed. But more broadly, wooded elements (hedges, isolated trees) can be constitutive of the saltus insofar as they have an agricultural vocation. If the feeding of livestock is the primary purpose of the saltus, which justifies its management by humans, other functions are commonly associated with the saltus: shelters for animals (protection against the wind and sun), provision of construction materials (rushes, but not hardwoods), small firewood (from hedges for example) or fruit and mushrooms exploited on a harvesting regime.

Like the horticultural activities of the hortus, the pastoralism and transhumance of the saltus have been absorbed into the general umbrella term *agriculture* of today.

Functionally, the vegetation composing the saltus is capable of closing the cycles of nutrients autonomously: it does not depend on human-led active fertilization to grow and to persist over time. From this point of view, it is fundamentally close to the *silva*. But its agricultural purpose distinguishes it and the pressure of grazing and light harvesting of biomass confers on the saltus an open or semi-open character in terms of landscapes. Without the maintenance of an agricultural and pastoral management, and with enough precipitation, many saltus would evolve towards a forest cover. On the other hand, the saltus could be degraded to the point of desertification if excessive grazing pressure is applied over long periods of time, in the absence of sufficient precipitation.

The saltus plays a vital role in fertility transfers within cultivated ecosystems. The biomass produced by the saltus is ingested by domesticated grazing animals and transferred in the form of manure carefully collected and spread in the cultivated fields of the *ager*. Therefore, historically, the saltus was an indispensable element of the functioning of mixed farming systems.

The appearance of synthetic fertilizers made it possible to abandon this function of the “fertility well” of the saltus, but in many contemporary systems, it continues to play a more or less important role in the supply of biomass energy. Equally, in a landscape ecology approach, the landscaping components of the saltus can accommodate birds or insects regulating crop pests.

Finally, the *silva* (still certainly linguistically present today in such words as “selva”-jungle- in Spanish) represents the other extreme boundary of agriculture – as far from the *domus* as possible. The silva typically sees lower levels of human intervention. Home to the highest levels of biodiversity of the 5 zones, the complex synergies of thousands of species work to produce “forest products” such as mushrooms, berries, medicinal plants, meat, and of course, wood. Cultivating trees for their fruits (such as apples, avocados, and olives) certainly falls within the definition of agriculture. However, cultivating trees for the main purpose of harvesting wood does not. Such practices, along with the general management of wooded areas to prevent forest fires, or foment biodiversity, amongst other ends, are relegated to the worlds of *forestry* and *silviculture*. Even then, it is acknowledged that there is a large amount of knowledge transfer and overlap between silviculture (the management of forests) and agriculture.
4. Culture

The second half of the word agriculture is loaded with meaning, and has taken on tremendous significance in recent centuries in both providing sustenance for our stomachs and minds.

*Kʷel-* has appeared in varying forms in all of the descendent tongues of PIE, such as Iranian, Kurdish, Greek, Celtic, Prussian, etc. Initially meaning to move, to turn (around), to revolve around (and therefore to sojourn or dwell), it even spawned such terms as *inguillino* (Spanish for inhabitant.) In Latin, it became *colō*, which likely had an original sense of turning up, or plowing the soil for cultivation. By extension, this meant inhabiting a place; and by further extension, it involved the improvement of one's home by tilling/cultivating the land and producing crops. Figurative extensions of tending, nurturing, improving, perfecting can be inferred. To this day, *culture* plays a large linguistic role in farming in European languages.

<table>
<thead>
<tr>
<th>EN</th>
<th>FR</th>
<th>ES</th>
<th>IT</th>
<th>PT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crop (not yet mature)</td>
<td>La culture</td>
<td>el cultivo/l a cultura</td>
<td>la coltura</td>
<td>o cultivo</td>
</tr>
<tr>
<td>The act of agricultural cultivation</td>
<td>La cultivation</td>
<td>el cultivo</td>
<td>la coltivazione</td>
<td>o cultivo</td>
</tr>
<tr>
<td>Crop (harvested)</td>
<td>la récolte</td>
<td>la cosecha</td>
<td>il raccolto</td>
<td>a colheita</td>
</tr>
</tbody>
</table>

It is posited that the modern term "culture" (in the non-agricultural sense) is derived from a term used by the Ancient Roman orator Cicero in his Tusculanae Disputationes, where he wrote of a *cultivation* of the soul (in Latin, "cultura animi") using the hitherto-agricultural metaphor for the development of a philosophical soul, understood as the highest possible ideal for human development.

Nowadays, culture describes an abundance of aspects of our lives. Below is a listing of the top definitions by Merriam Webster. A deeper investigation of this lies outside the scope of this report.

| 1a: the customary beliefs, social forms, and material traits of a racial, religious, or social group also: the characteristic features of everyday existence (such as diversions or a way of life) shared by people in a place or time |
| 1b: the set of shared attitudes, values, goals, and practices that characterizes an institution or organization |
| 1c: the set of values, *conventions*, or social practices associated with a particular field, activity, or societal characteristic |
| 1d: the *integrated* pattern of human knowledge, belief, and behavior that depends upon the capacity for learning and transmitting knowledge to succeeding generations |
| 2a: enlightenment and excellence of taste acquired by intellectual and *aesthetic* training |
| 2b: acquaintance with and taste in fine arts, humanities, and broad aspects of science as distinguished from vocational and technical skills |
| 3a: the act or process of cultivating living material (such as bacteria or viruses) in prepared nutrient *media* |
5. Agricultural neologisms for new philosophies of farming

In the last century, the unsustainable excesses of industrial agriculture have given rise to alternative, more environmentally-friendly hybrid forms of farming, which have adopted parts of the etymology of the word *agriculture*. The term *agroecology* was coined in 1928 by Russian scholar Basil Bensin, though it did not catch on as a recognized term until the 1980’s. *Permaculture* was first used by Australians Bill Mollison and David Holmgren in 1978. Though there are some subtle differences between the two terms, both agroecology and permaculture refer to the intentional co-location of multiple crops on the same plot of land, in order to harness synergies between different species. Beneficial insects, fungi, and animals are also involved in the mix, which values recycling of nutrients via composting and other techniques of waste utilization. *Agroforestry*, a term coined in the late 1970’s, is a version of agroecology that purposely incorporates trees inside the farming plots, to provide shade and other ecosystem services.

*Cultured meat*, only coined in the last decade (as the science behind this nascent industry is still very new) refers to the controlled growth of animal cells in laboratory environments, for end uses such as human food and leather products.

It has been a long and infinitely complex journey from the crudely-kept wheatfields of the Proto-Indo-European barbarians, to the uncountable varieties of music, literature, and art the world has produced, and finally to the cruelty-free cultured protein that may keep the first inhabitants of Mars alive and healthy. It is certain that the linguistic and cultural elements of the word *agriculture* have become one with humanity. Though Earth’s *ager* may someday disappear as humanity reaches distant stars, we cannot exist without *culture*; it is what sustains us and makes us human.