

# Factors which led to the origins of agriculture history essay



**ASSIGN  
BUSTER**

The transition from a hunter-gatherer lifestyle to that of an agriculturist, is considered by some, to have been inevitable as part of the natural evolutionary progression and development of man (Rindos 1986: 6). It is in our nature as humans to be progressive and, as such, we automatically follow a sequence of pre-ordained (Harris 1986: 12) and invariable steps in order to achieve higher levels of social development (Westropp 1872, cited by Barker 2006: 8). A lack of knowledge was the only factor that prevented the transition from hunting and gathering to farming; before the Holocene, man had simply not reached the cognitive nor cultural level required to formulate the concept of agricultural subsistence (Richerson et al. 2001: 394). Bender agrees, noting that the mental capacity and physical dexterity of the humans that were responsible for the origins of agriculture, in contrast to hunter-gatherers of 4million years ago, were significantly more advanced, which in turn enabled the development of more complex societies (Bender 1978: 209). This suggests that the accumulation of knowledge regarding their local environment and resources, led eventually to experimentation and ultimately domestication. At the Cave of Diaotonghuan in the Jiangxi province of China, there is a gradual growth in the number of rice phytoliths of domestic form in relation to those of wild form (Higham 2005: 242). This indicates a gradual assimilation of domesticates into their subsistence base following the acquisition of appropriate knowledge in regards to domestication of their local resources; this eventually led to total reliance on intensive agriculture. Similarly, at Abu Hureyra in Northern Syria, the percentage of gazelle bones decreases over the sites period of occupation, whereas the number of bones belonging to domesticates gradually increases, eventually becoming the dominant component in the villagers

<https://assignbuster.com/factors-which-led-to-the-origins-of-agriculture-history-essay/>

subsistence base (Watkins 2005: 214). This was not a rapid, single event, but a more gradual process in which the villagers steadily became more dependent on domesticates. These examples demonstrate how knowledge was the limiting factor and how the gradual accumulation of knowledge (Zvekebil 1986: 9) and the resulting familiarity with potential domesticates resulted in their manipulation (Braidwood 1960, cited by Cohen 1977: 8), and, ultimately, domestication. The varying rates at which different cultures adopted agriculture can also be explained by this model; it took different societies different amounts of time to acquire the required level of knowledge and familiarity with their local resources (Braidwood 1960, cited by Richerson et al. 2001: 399); until this was achieved, progression to domestication could not occur.

It is a common assumption that the lifestyle that is concurrent with agricultural production is significantly superior to that associated with Hunter-Gatherer communities. It has been suggested by some that if the adequate level of knowledge and cultural readiness had been achieved in favourable ecological circumstances, then the advantages of agriculture would have appeared so discernable as to make the transition to a domestic mode of production axiomatic (Zvelebil: 1986(b): 8). It is wrong to make this assumption, however, as it is not inevitable that agriculture will bring with it an easier and more reliable lifestyle; indeed, it has been adduced that the emergence of agriculture brought with it a number of disadvantages. These include chronic malnutrition - the consequence of an instable subsistence base and resultant famine - increased labour input and reduced leisure time. Furthermore, the appearance of widespread stress does not occur until

reliance upon intensive agriculture is well established (Rindos 1986: 38). The Kung!-San Bushmen of the Kalahari Desert provide an interesting illustration of a modern hunter-gatherer group that has no need or desire to transfer to an agrarian way of life. Their subsistence base consists of varying wild materials, including both preferential and contingency resources; they operate on a schedule of strategic seasonal movements in order to exploit particular resources at specific times and locations throughout the year (Lee 1968, cited by Barker 2006: 29). Various mechanisms, including infanticide, allow population levels to be kept low and well within the capacity of the available food supply (Lee 1968, cited by Scarre 2005: 186) as well as enabling them to maintain their ubiquitous lifestyle. The Kung!-San do not suffer from any 'Puritan Ethos' (Bender 1978: 206), and therefore the number of hours per day spent collecting food is kept to a minimum, relinquishing the majority of their time for leisure purposes. It can be seen, therefore, that the hunter-gatherer lifestyle can provide a reliable and varied subsistence base, as well as a more relaxed style of living; the incentives for transition to an agricultural lifestyle are not obvious. Because of this, it is possible that hunter-gather communities did not willingly accept to abandon their lifestyle of choice, but were instead forced by some external factor. Stark identified such factors as 'Push Models' - people were coerced into farming by some common factor or stress (Stark 1986, cited by Barker 2006: 36). Bellwood agrees, stating that there are no compelling reasons why hunter-gathers would have adopted agriculture, unless pushed (Bellwood 2005: 41).

The origins of agriculture are often attributed to climatic variation, a significant 'push' factor in the process of achieving intensified domestication (Moore 1986: 626). The study of ice cores, deep sea cores, and pollen profiles has revealed that the Post-Glacial period was characterised by a cold, dry and extremely variable climate. The transition into the Holocene, however, saw a shift to a more stable climate, with warmer and wetter conditions (Bellwood 2005: 20). It is this important climatic transition that is thought to have enabled the conversion to agriculture and is the foundation of a number of important hypotheses regarding agrarian development. An example of such is Childe's "Oasis Theory"; he promotes that the melting of the European ice sheets at the end of the last glaciation would have forced rain bearing depressions north, promoting desiccation in the Near East. This in turn would have forced animals and humans into closer proximities around the ever decreasing number of water side locations. This allowed humans to develop a greater understanding of their local resources, and further to this, enabled them to realise the benefits of establishing a symbiotic relationship with the local fauna, as opposed to exploiting them using hunting strategies (Childe 1936 cited by Scarre 2005: 188); the advantages of this would simply have become obvious to them given the stress they were under from post glacial desiccation (Barker 2006: 14). An example of how desiccation can affect the subsistence base of a society can be found at Abu Hureyra. During the Pleistocene the villagers were dependent on a wide range of resources; they hunted wild cattle, sheep and gazelle, but also gathered a number of different plant species. With the onset of the Younger Dryas, the colder and more arid climate made gathering more difficult. The people of Abu Hureyra instead turned to intensive cultivation of rye, a robust cereal

<https://assignbuster.com/factors-which-led-to-the-origins-of-agriculture-history-essay/>

that could withstand the more difficult conditions (Watkins 2005: 214).

Although this supports Childe's idea that it was desiccation that caused the transition to agriculture, his theory in general is flawed and cannot be universally applied. Pollen analysis in the Near East confirms that the Early Holocene was indeed characterised climatically by a warmer, wetter regime and not by desiccation. The climatic transition in this region progressed from dry to moist, rather than the reverse, which devalues the foundation of Childe's hypothesis (Wright 1977 cited by Rindos 1984: 15) due to the unsatisfactory environmental data which is the basis of his claims. The emergence of domesticated rye at Abu Hureya between 10800-9600BC, or during the Younger Dryas, is very early in contrast to other sites. For the most part, agriculture in the Near East was not adopted under desiccated conditions, but in the warmer and wetter conditions of the Holocene. The recovery and study of rice phytoliths at the Cave of Diaotonghuan in the Jiangxi province of China has revealed a correlation between climate change and the development of the domesticate. Within Zone G, which correlates to a period of more favourable climate, there is relatively high number of rice phytoliths. This number severely depreciates within Zone F, however, which is reflective of the colder and more arid climate of the Younger Dryas. The quantity of phytoliths once again increases significantly within Zones D and E due to a longer period of warmth between 8000-6000BC; the phytoliths here are evenly split between wild and cultivated forms. By Zone C, the phytoliths are entirely cultivated in form, and remain abundant, due to the continuing warm climate. This sequence reveals a correlation between fluctuations in climate and the quantity of rice phytoliths present. During colder periods, the amount of phytoliths decreases, whereas, they increase with more

<https://assignbuster.com/factors-which-led-to-the-origins-of-agriculture-history-essay/>

favourable climates. Ever increasing quantities of phytoliths of domestic form relative to the quantity of wild is also observable during the warmer periods (Higham 2005: 241). This demonstrates that it was during better climatic conditions that domesticates began to be more widely utilised, and not during periods of desiccation. Although Childe's theory is, in general, flawed, there is evidence to support the claim that climatic variation did indeed have an effect on the origins of agriculture.

One of the most interesting theories regarding the origins of agriculture considers the relationship between sedentism, population growth, and the availability of local resources; the transition to agriculture occurred, simply, because of disequilibrium between the number of available resources and swelling population numbers (Zvelebil 1986 (a): 9). Increased sedentism brought with it relaxation of mechanisms and birth controls previously used to keep population levels low (Rindos 1984: 19), which resulted in a significant increase in population numbers. The favourable, coastal, resource rich areas, that could previously support these smaller, hunter-gatherer populations, could no longer cope once the population had expanded beyond the regions carrying capacity. This led to expansion into more marginal zones (Binford 1968, cited by Bellwood 2005: 22 and Scarre 2005: 189), until further territorial extension became undesirable or untenable (Cohen 1977: 12); the populations of these areas were then forced to turn to agriculture as a means of subsistence intensification, allowing them to feed their growing numbers. This theory is particularly desirable as it not only accounts for why agriculture was adopted, but for why it occurred at differing rates at various different loci - 'Population pressure had simply not yet reached the point

where reliance upon agriculture was called for (Rindos 1984: 33)'.

Unfortunately, there is an underlying problem with this hypothesis. As mentioned above, climatic change cannot be used as a globally extendable explanation for the change in subsistence base; climate, by nature, is regionally specific and the effects of it are therefore hugely diverse (Rindos 1984: 16). The favourable coast line habitats, which, according to Binford, were the areas where people first turned to sedentism, flourished with increasing sea levels. However, increased sea levels would affect differing coastlines in a number of ways (Cohen 1977: 7) - the creation of superior habitats is just one of these. This would not have been a universal or uniform effect, and therefore cannot be a globally applied theory for the origins of agriculture. It still seems tenable, however, that population growth would have brought about a necessity for agriculture in order to provide a more stable food supply for an ever increasing population.

Alternative views consider the origins of agriculture to be the result of social factors. Bender in particular promotes this idea, claiming that other factors, such as demography, are often considered to have played a much greater role than is realistic, whilst social structure is significantly over looked (Bender 1978: 204); 'ultimately it is the social relations that articulate society and set the evolutionary pattern'(Bender 1978: 218). In other words, it is social factors that bring about the most significant transitions and cause the greatest change. Competition between social groups is often considered to have led to the development of intensified food production in order to provide the specifically valued kinds of food deployed in competitive strategies and acts of reciprocity (Scarre 2005: 187). Feasting and the



accumulation and distribution of prestige items were common mechanisms for achieving wealth, status and power. They are, however, expensive in terms of subsistence and require surplus resources (Zvelebil 1986(a): 10); hunting and gathering can only supply limited resources. This is why agriculture was developed - in order to 'fund' such reciprocal mechanisms via a more stable and consistent subsistence base. Alternatively, for Hodder, the domus - 'the location of production and reproduction which constitute society and social relation' (Hodder 1990: 39) - was the social mechanism which drove the transition to agriculture. As a concept, it acted as a metaphor for the desire to control and transform nature; the individual experience of domestication led ultimately to intensification and domestication (Hodder 1990: 41). In summary, for economic domestication to be successful, it must be preceded by social domestication. Both of these examples illustrate how social pressure provided a positive incentive for hunter-gatherer societies to transfer to an agricultural lifestyle. Bellwood, however, considers an alternative view on how social pressures had an effect on the transition to domestication in certain landscapes, from the perspective of how hunter-gatherer communities were put under pressure from agriculturalists moving into their territories looking for regions of high agricultural potential. The relationship between the 'native' hunter-gatherers and 'invading' agriculturalists would have initially been one of exchange, and would have been mutually beneficial to both parties involved (Bellwood 2005: 41). It is often considered that contact with the agriculturalists would eventually lead the hunter gatherers to realise of the benefits of domestication, encouraging them to switch to this lifestyle. Bellwood suggests, however, that this may not have happened; he argues that as <https://assignbuster.com/factors-which-led-to-the-origins-of-agriculture-history-essay/>

pressure on resources increased, along with increasing attempts by the agriculturalists to dominate the hunter gatherers, this would only have dissuaded them to change their lifestyle (Bellwood 2005: 41). This form of social pressure therefore acts only a deterrent to the adoption of agriculture.

It can be seen therefore that no one explanation for the origins of agriculture is entirely satisfactory. This is to be expected, however; these factors are conceived at level that is too general to account for local distinctions (Moore 1986: 622). Domestication would have been adopted for a number of distinct and differing reasons, due to the diverse nature of the various loci where agriculture originated (Zvelebil 1986(b): 167). The origin of agriculture was not brought about by one driving factor - it was not a monocausal phenomenon (Scarre 2005: 186). It was a combination of factors - most importantly climatic variation, demographic change and social pressure, as well as the accumulation of necessary knowledge - which would have combined in various ways to ultimately bring about a shift to food production.