

It is impossible to separate the scientific content of the theories of Walter Christaller from the historical context in which they were formulated. If it is made, scientific content escapes criticism and is made sacred. Walter Christaller morality, ideology and science are inseparable. He combined them in his "*Prinzipien*". General principles are both logical and explicative. Operative principles are operating rules which affect the choice of methods and techniques. The importance of general principles does not depend on the frequency of their explicit use. They play a role in the formulation of operative principles and guide the choice of techniques and methods.

In his 1968 "confession" [*Wie ich zu der Theorie der zentralen Orte gekommen bin. Ein Bericht, wie eine Theorie entsteht kann, und in meinem Fall entstanden ist. Geographische Zeitschrift*, 56, 88-101] Walter Christaller explains that, « if we search how an economic fact acts geographically [...] it is the economic function that organises [...] and manufactures the external form of phenomenon [...]» (p. 91) But: «economic value must not only be a principle of selection (*Ausleseprinzip*) of what is pertinent from a point of view of economic geography, [...] That is why I've chosen to take as a key criterion of valuation of the central function of a [human] establishment the number of its telephone connections» (p. 92). Using the number of these connections he calculated an «indice of centrality». He measured the distances between the places on the map of South Germany he realized with this «indice of centrality». He deduced from it the size of the «zone of influence», that is to say of the territory which surrounds them, corresponding to the rank in the hierarchy.

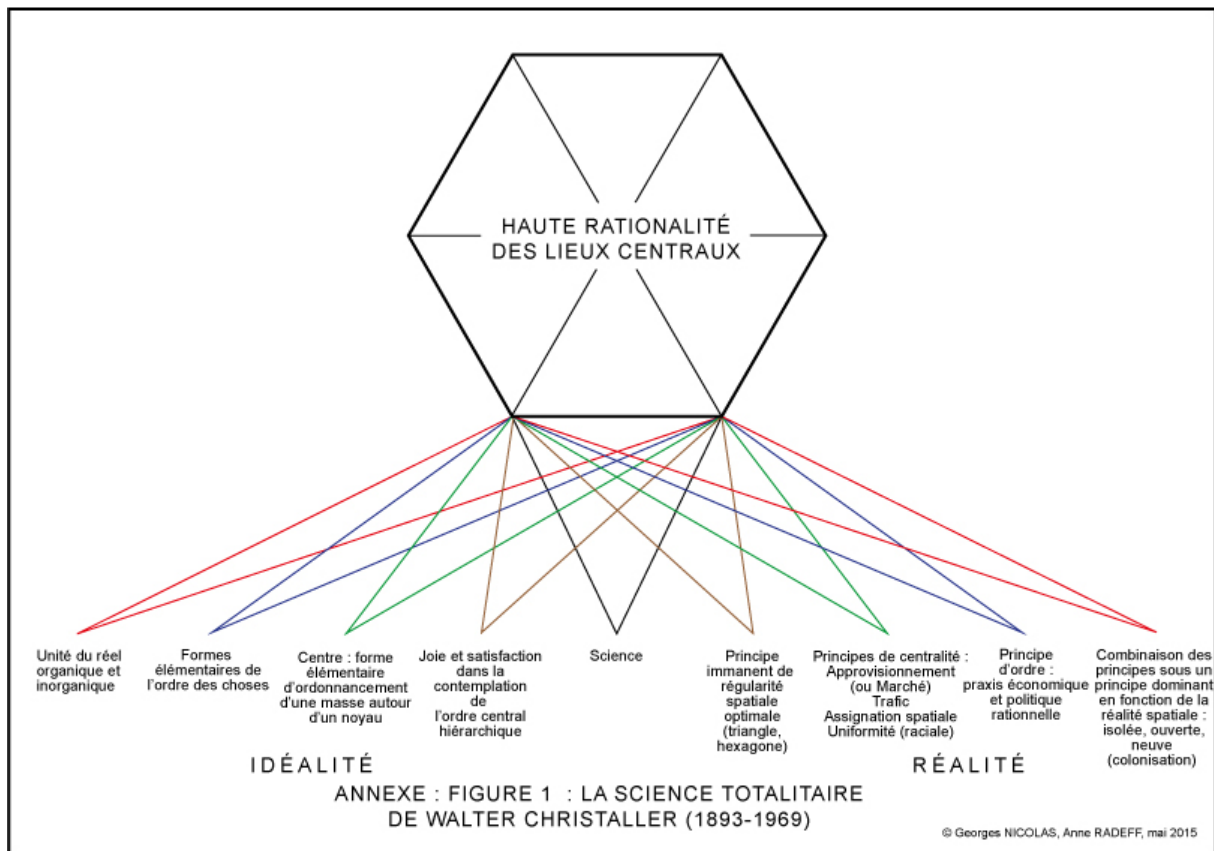
Therefore, these are not straight lines drawn between populated places which allowed Walter Christaller to deduct the hierarchy of places (line → distance → function → hierarchy) but the hierarchy of the central places which allowed him to measure the distances separating them (hierarchy → line → distance → function). His operative principle of selection (*Ausleseprinzip*) works as the operative principle of space allocation (*Zuordnung- (Verwaltungs-) Prinzip*: Principle of [space] allocation (and of administration)). This operative principle is linked to the general order principle («*das Ordnungsprinzip*») which is hierarchic and pyramidal. As in the imperial army where he served during the First World War and in NSADP of which he became a member in 1940.

Afterwards, to measure central distance between places represented by points on a map, Walter Christaller drawn straight lines between places having the same population. This cartographic representation seems to be scientifically « objective ». But it is determined by the pyramidal hierarchy of central places' population. At each hierarchy level all places are at the same time equal among each other and subjected to the places located at the just above level. Equality among all Aryans living in the same place (cartographically located with

rigorously equivalent points) reproduces the submission of the people (*Volk*) of the Empire (*Reich*) to a single leader (*Führer*) located at the top of the pyramid. Therefore, these successive choices are not "neutral".

The absence of neutrality comes out very clearly when Walter Christaller is looking for a geometric solution to the distribution of the «central good». He is so convinced of the superiority of the pyramidal space organisation that he claims that his triangulo-hexagonal construction from an initial central place at the summit of hierarchy is "natural". « It seems to us superfluous to express the previous results by mathematical formulas [...] the mathematical solution is naturally (or: of course) possible and is not difficult. (*die mathematische Lösung ist selbstverständlich möglich und nicht schwierig*) » (*Die zentralen Orte in Süddeutschland*, p. 75.). But it has been proven that this construction is geometrically wrong.

Therefore, Walter Christaller's assertions must always be examined both ideologically and scientifically at the same time. When Walter Christaller's ideas are used disregarding their totalitarian content, we recover a scientific biased content. But, conversely, when Walter Christaller's ideas are only ideologically criticised, paradoxically, their biased scientific content is made convenient and useful.



So, in researches that do not take into account these epistemological pitfalls, spatial organisations of non hierarchic and non pyramidal central-decentral places, historically observed and scientifically possible, are neglected.

Mezza-Garcia, N., & Maldonado, C. E. (2015). Crítica al control jerárquico de los regímenes políticos: complejidad y topología. *Desafíos*, 27(1), 121-158. doi: dx.doi.org/10.12804/desafios27.01.2015.04

<http://www.scielo.org.co/pdf/desa/v27n1/v27n1a05.pdf>

Walter Christaller's thought is intrinsically totalitarian.

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