

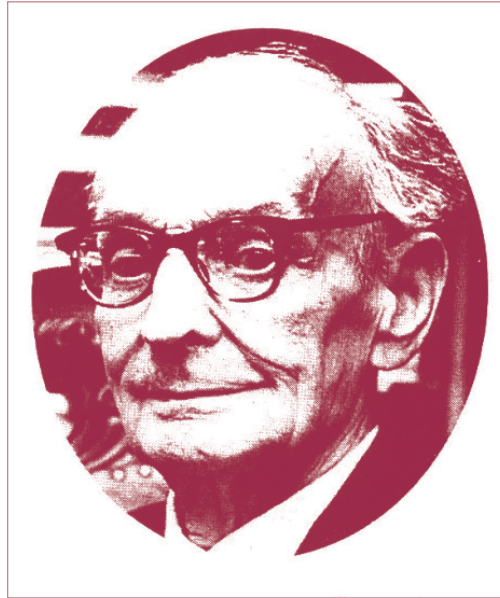
# From the archive: Christaller's central place theory

Richard delves into the Geographical Association journal archive to reappraise Christaller's work two decades after it practically disappeared from geography classrooms.



Accompanying  
online materials

Figure 1: Walter Christaller, 1893–1969.



The 'central place theory' (CPT) developed by Walter Christaller (1933) was once hailed as 'geography's finest intellectual product' (Bunge, 1966, p. 133), and was a key feature of many A level geography courses right up until the end of the last century. Yet students of today, and many young teachers entering the profession, have never heard of it.

## Central place theory (CPT)

The theory itself was developed by Christaller in 1933, based on his observations of settlement patterns in rural southern Germany. The models he developed (Figure 2) show a theoretical relationship between settlements across a region. Each of these settlements acts as a 'central place,' providing goods and services

for surrounding populations. Christaller argues that central places have a hexagonal 'market area', whose populations are served by their nearest central place. Some central places develop into larger towns and cities with a larger market area and hence a larger hexagon; others remain small. A settlement pattern develops:

- many small central places, with small market areas, selling mainly low order goods (everyday items such as milk and newspapers)
- a smaller number of middle-sized settlements serving the needs of a larger population and offering a wider range of services
- large towns and cities providing middle- and high-order goods and services (such as furniture shops and theatres) to a larger population.

Wherever anyone lives within an area they will have access to a range of settlements of varying sizes. The first of his models ((a) in Figure 2) shows the basic pattern, based purely on mathematical or 'marketing' principles, reducing travel time for the population. Variations of his model took into account transport routes (b), in which larger central places are located on routes between smaller places; and administrative needs (c) in which one central place wholly serves neighbouring areas. Christaller's work was key in developing the understanding of geographical concepts such as settlement hierarchies (the ranking of settlements according to size), range of goods (the maximum distance someone is prepared to travel to obtain a particular service) and threshold populations (the minimum number of people required to support a particular service).

In 1966 an English translation of Christaller's work came out and a review was published in *Geography* the same year (M.C., 1966).

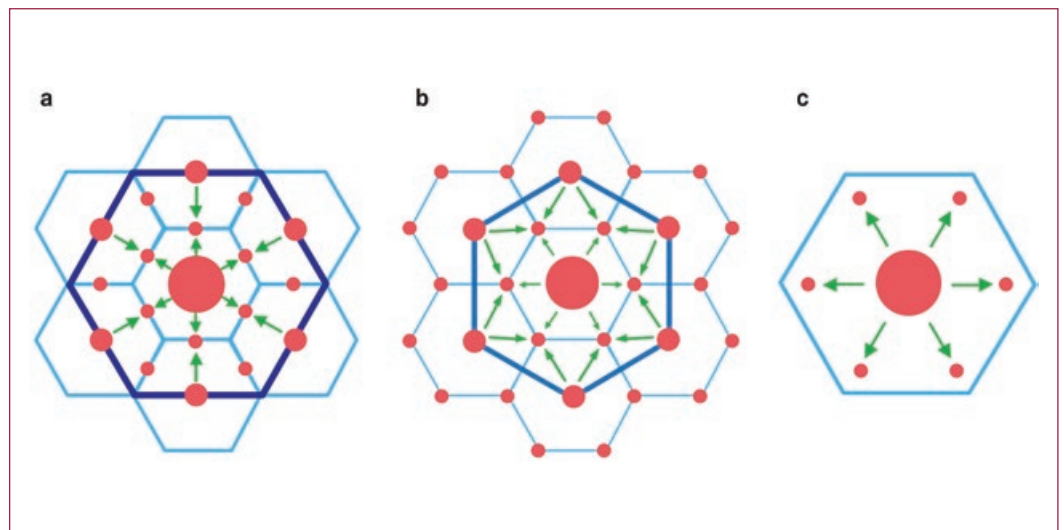


Figure 2: Christaller's central place theory based on (a) marketing principle; (b) transport principle; (c) administrative principle.

CPT was influential in school geography through the 1960s when the subject was mirroring the university discipline and moving away from a simple regional descriptive approach ‘to involve the use of theoretical models, conceptual frameworks and quantitative techniques ... (which) shifted the emphasis ... towards the search for repeating patterns and processes’ (Boardman and McPartland, 1993a, pp. 67–8). As Wolforth (1976) argued, ‘models ... provided a framework for the design of syllabuses. Perhaps for the first time geography was seen to have a distinctive structure’ (p. 143). The simplicity of these structures was seen to be ‘readily acceptable to children’ (Maund and Jenkins, 1970, p. 434). Yet like many of the descriptive models of the world developed at that time, CPT had its shortcomings. It did not take into account individual decision-making about consumption choices and assumed people would go to their nearest central place; it assumed settlements developed on a flat isotropic plain and so it did not really ‘fit’ the real world. Recalling his own experiences of studying A level geography in 1978, Percival (2013) recalls:

*... the human geography was very much based on patterns of settlement, and the theories ... and was not particularly interesting or inspiring. Possibly I was too young and immature to really engage with theoretical models; they all seemed to lack relevance and explanatory power. As I recall, virtually no real pattern of settlement ever matched the theoretical models, so it was hard to get too enthusiastic about them! (p. 30)*

CPT was influential in its time, spawning a range of other research published in GA journals, in such fields as economic geography (e.g. Beavon and Hay, 1978; Bird, 1973), markets in developing countries (e.g. Bromley, 1971) and urbanisation (e.g. Potter, 1995).

The development of post-industrial cities, out-of-town retail centres, the development of internet shopping and the growth of globalisation rendered traditional settlement patterns, and thus these models, unrepresentative of a changing world. By the 1970s academic geographers were developing new approaches to making sense of the world which focussed much more on human choice and experiences of place. As Morgan (2003) explained, ‘the search for “relevance” in geography meant that topics like crime, health and hunger were added to the research agenda’ (p. 125). The development of behaviourist and humanist approaches to the subject identified the role that people played in consumption choices; postmodern approaches to the subject in the 1990s and beyond even rejected the very existence of models, rules and order as a means of explaining the world.

Teachers themselves were beginning to question the validity of models, as Boardman and McPartland (1993b) recalled of the 1970s:

*Reservations continued to be expressed about the wholesale adoption of models, theories and quantitative techniques in school geography courses. Some teachers felt that the*

*study of human and physical environments was being reduced to mere exemplars of models and theories (p. 118).*

The pages of *Teaching Geography* chart the changing attitudes towards the geography curriculum, away from the sorts of ideas typified by CPT. Marsden (1988) argued for a welfare approach to the subject and Mack (2004) even proclaimed ‘move over Christaller – funky geography is in’ (p. 69) in reference to a more student-centred, contemporary approach to the teaching of geography in schools.

Yet still CPT endured in classrooms, being taught in schools as part of settlement studies in A level courses throughout the latter part of the twentieth century. The geography taught in schools and the geography being developed in the academic discipline were very different (as observed by Goudie, 1993), a situation only really addressed in the curricular reforms of the late 2010s. CPT has only been outlasted in schools by the equally old and irrelevant model of cities developed by Burgess, which still seems to linger on in textbooks and classrooms today, an issue raised in a recent *Teaching Geography* article by Charles Rawding (2019), with a response in this issue (Puttick, 2020).

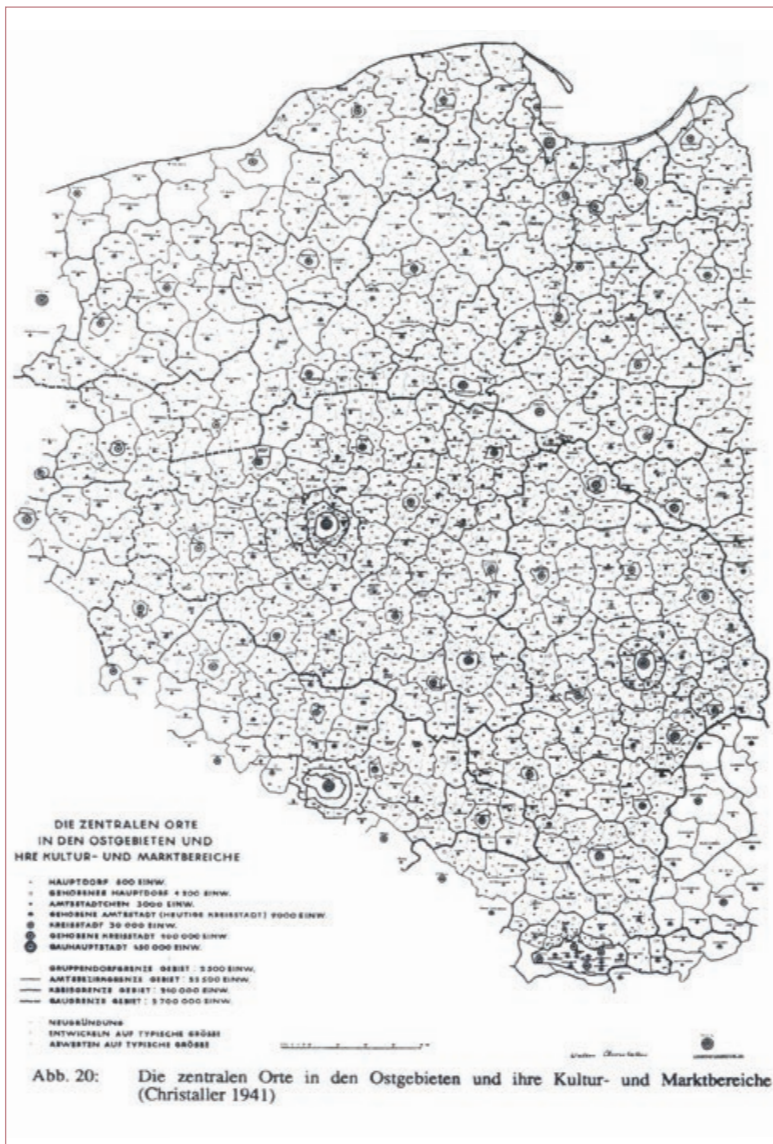
## Christaller and Nazi spatial theory

An often overlooked aspect of Christaller’s work is the impact it had on Nazi thinking during the Second World War. Christaller himself worked as a geographer for the Nazi Party, and his central place theory became the blueprint for planning settlements in Nazi-occupied Europe. As Barnes and Minca (2012) explain:

*Christaller’s task was to reconfigure the internal geography of Germany’s newly acquired territories. His particular charge was Poland, invaded by Germany in September 1939 ... Christaller brought his own geographical imaginary to the task, a curious mixture of spatial geometrical formalism and place-based rural romanticism ... it was a geography that perfectly fitted the Nazi ideological agenda (p. 2).*

Christaller’s proposal for settlement distribution in northern Poland in 1941, originally published in Rossler (1990) and reappearing in Machon and Lambert (2005), is shown in Figure 3. The circles show the various central places, with the varying sizes denoting the relative importance of each. It was part of a much broader range of changes to the landscape identified as ‘germanification’ by Machon and Lambert (2005). The end of the war and liberation of the occupied territories by Allied forces ensured this vision never became a reality. Far from just being a model to help explain settlement geography, CPT has a relevance and legacy steeped in historical significance.

The links between the theoretical model that Christaller developed, and the role it played in Nazi ideology in the Second World War, seem to have been conveniently forgotten by many in the post-war geography academic community.



**Figure 3:** The plan for the application of CPT to Nazi-occupied northern Poland, from 1941. **Source:** Rossler, 1990, reprinted in Machon and Lambert, 2005.

#### Online resources

A larger version of Figure 3 is available to download. Go to [www.geography.org.uk/Journals/Teaching-geography](http://www.geography.org.uk/Journals/Teaching-geography) and select Spring 2020.

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The same is true for its teaching in schools; as Machon and Lambert (2005) remarked: 'CPT is still taught widely in British school geography, though rarely with any reference to its origins' (p. 128). Yet it is precisely this view of the theory that invests the model with a relevance beyond a simple set of hexagons and circles. Percival's (2013) recollections of learning about boring theoretical models in geography lessons relate to a time when modelling attempted to simplify and sanitise the world. The context of its Nazi history would have invigorated the teaching of CPT with terrifying relevance and ensured engagement in the classroom.

## Conclusion

In his lifetime, Walter Christaller received many plaudits and awards for his work, including the prestigious Victoria Medal from the Royal Geographical Society in 1968. Yet his links to the Nazi Party seem to have been omitted from official histories. His Wikipedia entry proclaims 'he was never a Nazi', yet several academic accounts of his life suggest the opposite, with Barnes and Minca (2012) asserting that he joined the Nazi Party on 1 July 1940. Since his death geographers seem better able to reappraise his life and legacy, and his part in one of the darkest periods of European history.

CPT has an important place in the development of twentieth-century geographical thinking, and without it many contemporary developments in the subject would not have occurred. As a simple model to explain the modern world, its place in the classroom has passed. But it does have a renewed relevance in how geographical thinking can contribute to powerful ideologies; and how geography can be linked to historical discourse in a tangible way. | **TG**