

## Introduction to Geoinformatics – IFGI-Munster SS 2015

### Assignment #2 – An essay on “Ontology of Geographical Objects”

In this assignment, you will read papers related to the idea of ontology of geographical objects. Please read first the two papers by Barry Smith, the leading authority in the field (“On Drawing Lines on a Map”, “Do Mountains Exist?”). Then read the papers from Robinson (“Reexamining fiat, bona fide, and force dynamic boundaries for geopolitical entities”) and from Galton (“On the Ontological Status of Geographical Boundaries”). Both Robinson and Galton present a critical vision of Smith’s division between *fiat* and *bona fide* objects.

Your assignment is to write a 400-1000 word short revision of the topic “The Ontology of Geographical Objects”, using these four papers as a basis, but also making additional searches in the literature. Your assignment should consider, among others, the following issues:

- What is ontology and why is it relevant to GIS?
- What is a geographical object, considering the different definitions (Smith, Galton) and also the topological operations discussed in the previous assignment?
- What are the main differences between the views of Smith and Galton regarding geographical objects?
- What are the main criticisms by Robinson against Smith’s theory of *fiat* and *bona fide* objects?
- Do mountains exist?
- How is the ontology of geographical objects dealt with in the OGC standards?
- Consider the text below about the “The Kleinmachnow Syndrome” in the following page. What does the text teach you about the nature of geographical objects?

## The Kleinmachnow Syndrome

After the reunification of Germany, there were many administrative problems related to land ownership. The largest is to figure out who is entitled to which property. Often the real owner cannot be found and different people claim land or real estate as their own.

The tale of inequality began when communism took greater and greater control of East Germany in the 1950s. Many preferred the idea of living under American, British or French authority, or simply preferred capitalism, and they moved out in droves. In most cases, they simply left. In post-World War II Germany, property values were low enough that starting over was the easier option.

All of that abandoned property, officially, became the property of East Germany. But, in a typical German manner, the land records – and who had owned the property – were maintained.

The East German government didn't have the money to maintain the mass of homes it now had title to, so it started assigning houses to those who'd stayed in the East, encouraging them to take care of what existed. With a housing shortage, they urged people to build homes on garden plots when possible. While they didn't allow property ownership, to ensure those building that their new house wouldn't be taken away, the government offered 99-year leases.

Then the wall fell, many West Germans reclaimed the land properties they once owned. In Kleinmachnow, a little town near Berlin in East Germany, 80% of the private houses are claimed by West Germans. This is called the "Kleinmachnow Syndrome". When the country became one again, East Germans lost the homes they'd lived in, many for decades, to West Germans, who'd fled or abandoned them, depending on your perspective, but were able to reclaim them when Germany was unified. That eventually meant that 8,000 of Kleinmachnow's 11,000 residents were forced to leave their homes after unification. Nationwide, about 4 million of East Germany's 17 million population were displaced.