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CoP Ecosystem Services

The Outer-Inner-Space notion applied

Frankfurt Rhein/Main Region

1. Complexity made operational

We demonstrated¹ the Outer-Inner-Space notion as the guiding principle for our LL and ESS research.

As a meta structure, it serves to reduce the complexity of the underlying data: It is used to collate the wealth of spatial information in an operational way. With this paper we provide some background information.

2. Basic assumptions about eco system services supply and demand

Any area we are researching is either Outer Space or Inner space (figure 1). We assume that the ecosystems that provide services are located in the Outer Space. We also assume that the demand for eco system services is induced by land use in the Inner Space.

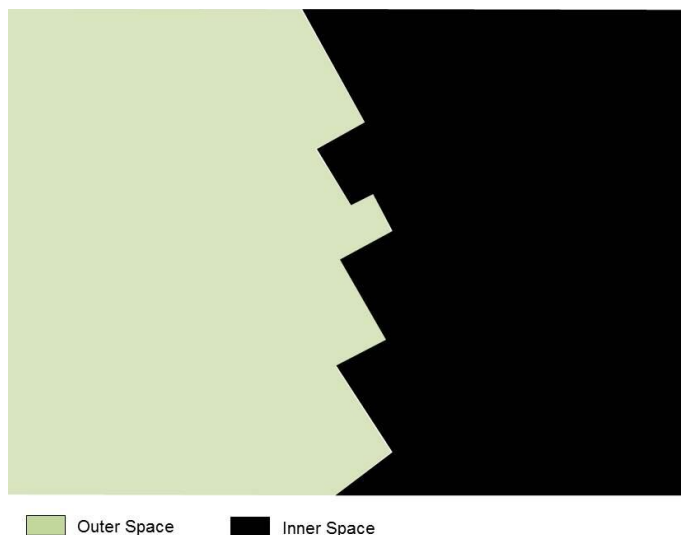


Figure 1: Schematic illustration of the Outer Space Inner Space concept

¹ Henke, R.: Refining a basic concept: The Outer-Inner-Space notion as a specification of the Rural-Urban dualism. Regional Authority FrankfurtRheinMain, Frankfurt am Main 2020

Eventually, we are aiming at the balance between provision and demand. For the time being, we focus on the *provision* of services, with the objective to categorise them in a comprehensive, consistent and quantifiable way.

3. A real life application

We are operating in a real life Living Lab: The research question is guided by the ongoing production of a new edition of our Regional Land Use Plan² (2030 Plan), and the results will feed into the legally defined procedure.

Accordingly, we have to add a dynamic component. These are the Proposition Zones³: The Regionalverband suggests, for the 2030 Plan, to concentrate additional “development”⁴ around the stations of passenger railway lines, within a 1000 m radius. Figure 2 illustrates the concept.

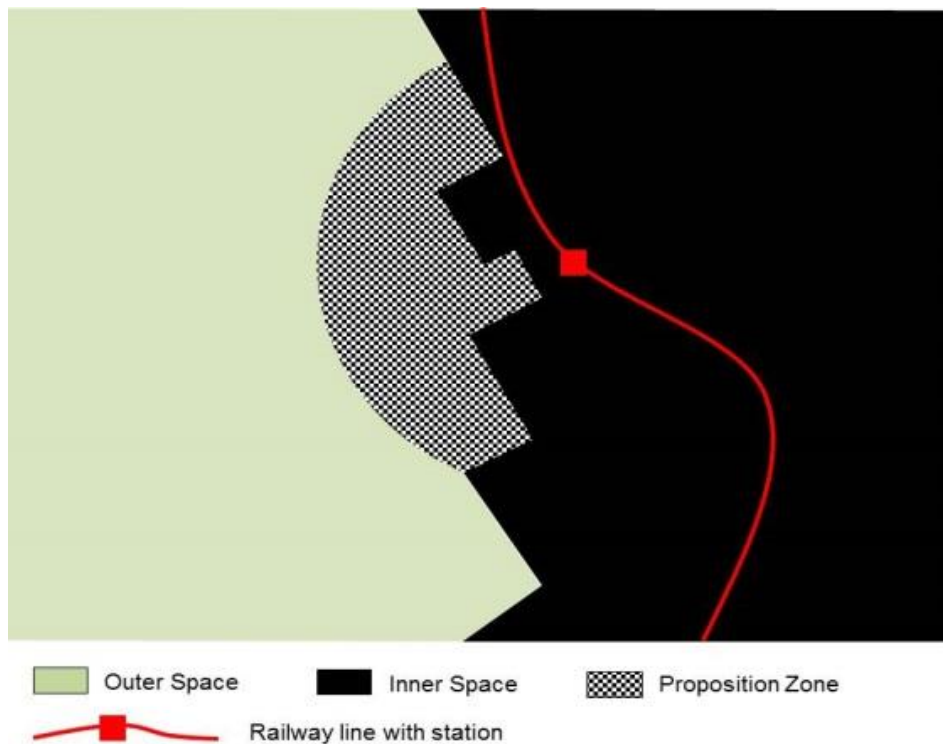


Figure 2: Proposition Zone around railway line station (schematic)

Schematic as it may look, this approach is differentiated enough to exclude zones unsuitable for “development”, e.g. nature reserves. Figure 3 illustrates the idea.

² For details: Rural-Urban Governance Arrangements and Planning Instruments: Regional Land Use Plan Frankfurt/Rhein-Main Region

³ The term „Proposition Zone“ is introduced here to avoid the German jargon: Internally, we call them *Vorzugsräume Wohnen*, that is “preference” or “priority” areas for housing.

⁴ „Development“ is a shorthand for: Areas designated for possible land take for additional buildings and related infrastructure.

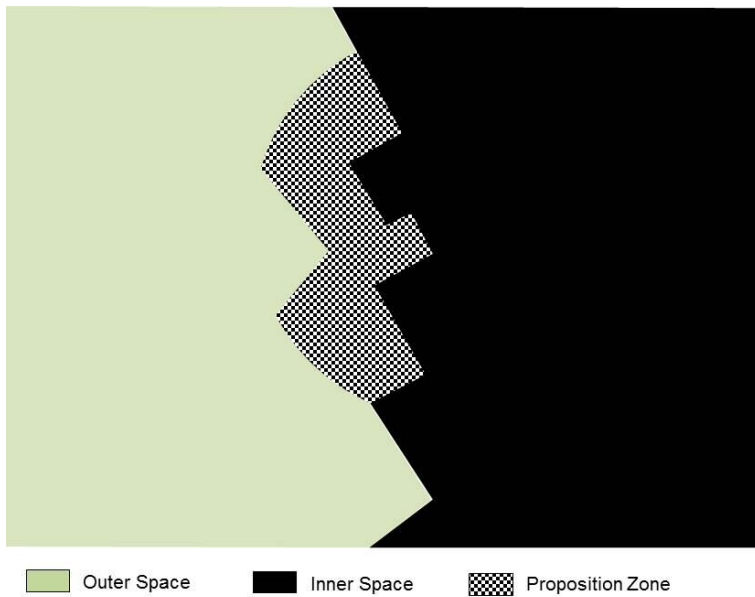


Figure 3: Proposition Zone reduced to account for taboo areas (schematic)

Eventually, we can discard the Proposition Zones notion for our research because we assume that these zones will be part of the Inner Space in the 2030 Plan (diminishing, obviously, the Outer Space).

We will stick with the Outer Space Inner Space dualism, but with two different layouts: The Status Quo version and the 2030 Plan version (Figure 4).

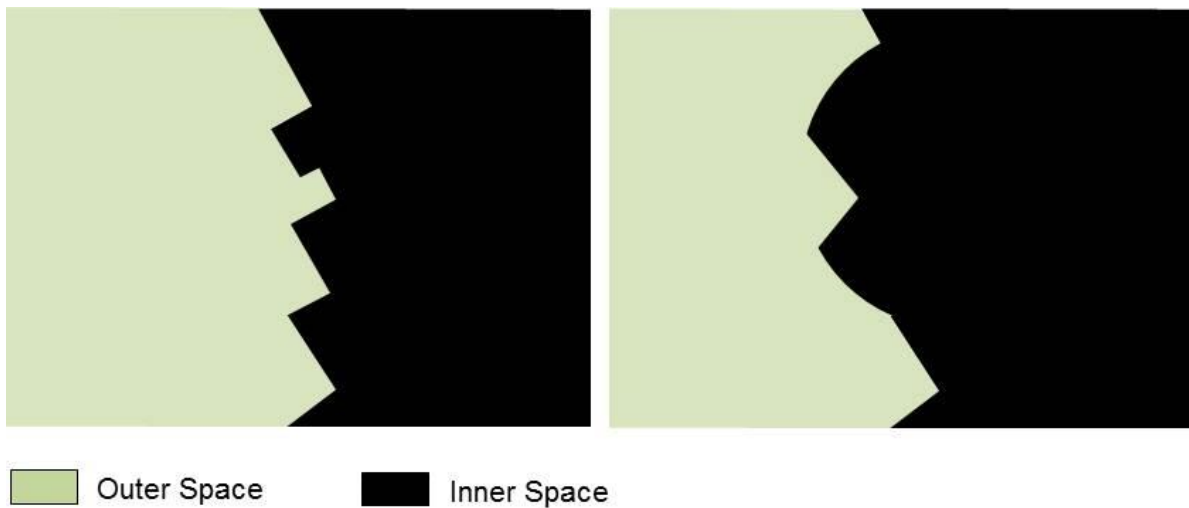


Figure 4: Outer Space Inner Space Status Quo layout (left) and Plan 2030 layout (right), schematic

However, as a means to refine calculations, the Proposition Zones notion can be used; it is a basis to indicate the Ecosystem Services loss induced by the new Plan.

4. List of References

Henke, R.: Rural-Urban Governance Arrangements and Planning Instruments: Regional Land Use Plan Frankfurt/Rhein-Main Region. Regional Authority FrankfurtRheinMain, Frankfurt am Main 2018

Henke, R.: Refining a basic concept: The Outer-Inner-Space notion as a specification of the Rural-Urban dualism. Regional Authority FrankfurtRheinMain, Frankfurt am Main 2020

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