6 Observer-independent geometry

July 5, 2002

This is a self-contained (but cf. p.772) part of the book
H. Andréka, J. X. Madarász, I. Németi: Logical structure of relativity theories [18].

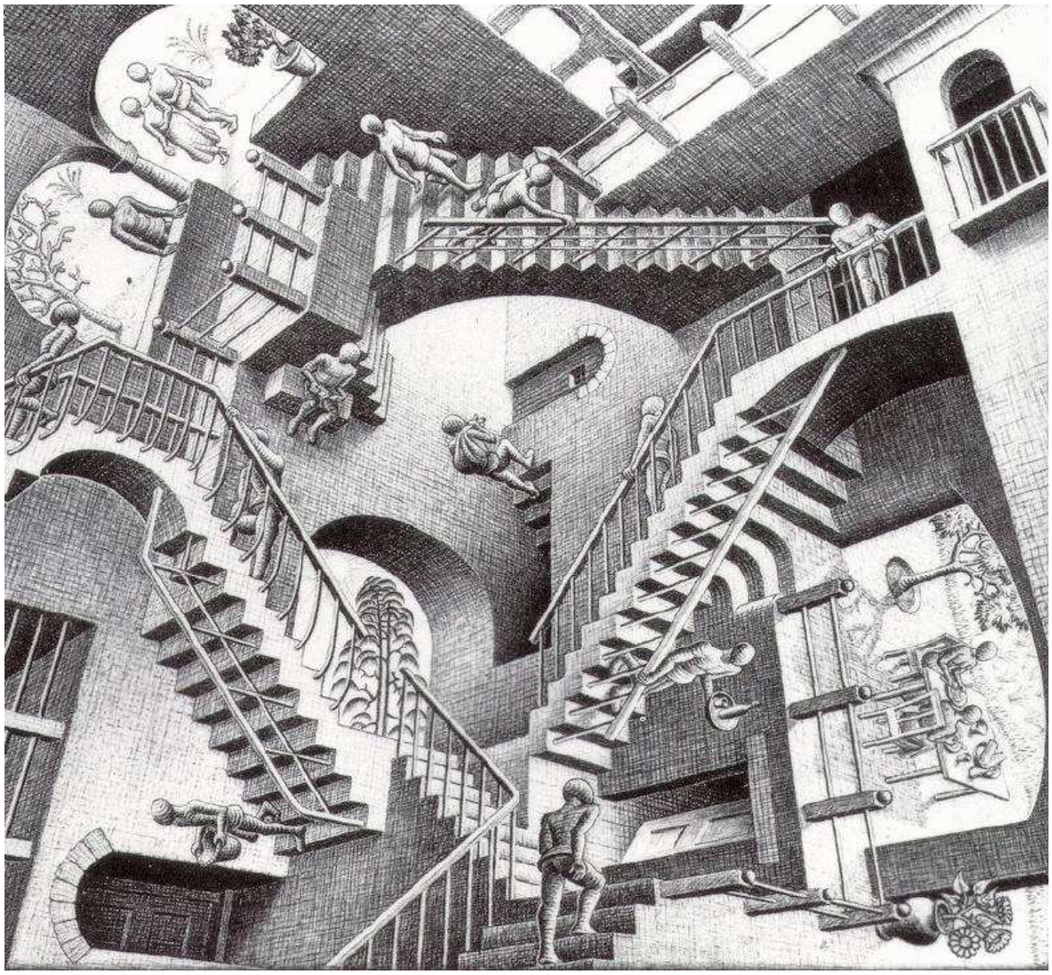

Figure 258: M.C. Escher's drawing entitled Relativity.

Contents of chapter 6

IMPORTANT:

This part (i.e. Chapter 6) is independently readable from the rest of the present work except for the introductory Part I (consisting of Chapters 1,2) which is of approximately 150 (easy going) pages. By "the present work" we understand the book [18] of which Part I is an independently readable "sub-book". Similarly, (Part I + Chapter 6) is also an independent sub-book.

Although the axiom system **Newbasax** is introduced in Chapter 3, it is recalled herein in the "List of axioms…" p.1253, hence the reader need not consult Chapter 3. (Occassionally we might use further axioms or axiom systems introduced in other chapters, but, again, they are recalled in the list of axioms.) Summing up, the present chapter together with Part I and various lists at its end is intended to be self-contained (and readable without access to the other chapters[615]).

Comments are welcome.

[615] which, for the interested reader, are available on our homepage or upon personal request via e.g. e-mail

A note to the reader. In this work, but especially in the introductory sections like § 6.1, the footnotes contain more important information than the main text. Therefore, especially during reading § 6.1 we recommend that the reader pay more attention to the footnotes than to the main text. We know that this is a highly unusual arrangement, but the logic of the situation forced this arrangement upon us. Namely, this way, a reader who has little time can read the main text without looking at the footnotes and he will get a coherent story about what we want to say *at the expense* of not learning about the relevant ideas of Kant, Mach, Einstein, Reichenbach, Gödel etc. which, in our opinion, make the subject interesting. If the reader wants to read about these ideas (and about why we do things the way we do) he can find them in the footnotes. If we lifted these interesting ideas from the footnotes into the main text, we are afraid, the main text would loose its coherence (too much detours, rumblings etc). A pleasant way of reading § 6.1 might be the following: First read through the main text only (to get a general impression) and then read the main text together with the footnotes paying more attention to the footnotes than to the main text. The same philosophy applies to the whole of this work (Chapters 1 - 6) and not only to § 6.1, but to a less pronounced extent.