If we forget for a moment about the beauty of maps and for another moment yet about the socio-historic meaning of maps, we can describe maps in rather dry terms as "tools for orientation in unknown territory". The territory that they might help us find a way in, can be real (as with geographical maps) or symbolic (as with maps in computer games). Susan Sontag reminds us that not everybody will use maps as orientational tools and refers to Walter Benjamin for whom maps would be a tool for getting lost. [Sontag, 1981] But for most travellers, explorers or computer game players, maps are instrumental in finding a way. They are *itineraria* - as the Romans called them -, wayfinders and routeplanners. We rely on the information maps contain to find places we are looking for and use them to navigate towards these places. Maps exist in a multitude of forms and can be built upon or include different perspective, topography and environment. They can be linear, 2-dimensional, 3-dimensional in a perspective mode, or 3-dimensional and isometric - or of a mixed mode in between the above. For those familiar with the typology of space as proposed by Aarseth, Smedstad, and Sunnanå the criteria of perspective, topography and environment will sound familiar. These are criteria supposed to be of key relevance in regard to distinguishing between different types of computer games. A glance at historic maps will disclose the very same triplet of criteria to be of crucial importance for a qualitative analysis of *mappae mundi*, maps of the world.

A small number of historic maps shall be looked at with aspects of perspective, topography and environment in mind.

![Fig.: T-O Map by Isidor of Sevilla, 6th century, in a reproduction from the 13th century](image)

The T-O maps, a type of maps used since the 6th and still into the 13th, displayed what was then considered to be *omnis orbis terrarum*: the world. The perspective was one of omnipresence. A circular line orbited what was in the world: Asia, Europe and Africa. The shape of the continents does not refer to real geography and outlines the T-O shape, that could be read as "Terrarum Orbis". Topological information outweighs geographical information. In these early examples of maps no non-navigable environment is present. The world map from
Albi, originating in the 8th century, slightly more detailed than the T-O maps, contains little geometrical information and provides almost no analogue information in regard to distance, size and direction. The topological space is discrete, as if countries were states in a binary system one can inhabit by being inside or outside only. Lybia, Carthago and Numibia are equally sized blocks of land without any differentiation in regard to the shape of the countries. Geometrical features like rivers and mountains are neglected. Even though this representation of the world is of pictorial nature with only a few words filled in, little information can be retrieved from the lines and shapes of the drawing.

Fig.: World map from Albi, 8th century

Even though maps like the carta Peutingeriana or the world map from Albi did not grant completeness of a world perspective in our days’ understanding, they allowed for omnipresence inside the cartographic system. This need not necessarily be so. There are and have been maps that favoured a vagrant view as opposed to an omnipresent view. The successful Falk Plan could be taken as an example for that.
The earliest forms of antique *itineraria* did not contain pictorial information to guide the travellers, but textual information only. *Itineraria scripta* were descriptions of travel routes in written format. The texts were copied and sold to travellers on their voyages. There were central information points in the city of Rome set up as official points of reference. Even in the late Middle Ages *itineraria scripta* were popular amongst pilgrims. A document written by an anonymous pilgrim from Bordeaux in the late 13th century and published in printed form in 1589 gives us an impression of how these early maps operated:

"Itinerarivm a Bvrdigala Hiervsalem vsqve, et ab Heraclea per Aulonam, et per vrbem Romam, ..." describes the way from Bordeaux to Jerusalem via Heracleum and Rome.

"( ...) mutatio ad sextum leugae vi
mutatio hungunuerro leugae vii
mutatio buconis leugae vii
ciuitas tholosa leugae vii
mutatio ad nonum milia viii
mutatio ad vicesimum milia xi
mutatio cedros milia vi
castellum carcassone milia viii
mutatio tricensimum milia viii
mutatio hosuerbas milia xv
ciuitas narbone milia xv"

"Change direction after the sixth leuga of the road (i.e. after 9000 double steps or 18000 steps), ... change after nine thousand steps, ... you reach the castle of Carcassone, you reach the city of Narbonne..." is how this *itinerarium* tells us where to go to. It is obvious that such a description was not reliable at all, and phrases like "dextra est arbor palmae..." (to the left is a palm tree) in the 595th line of the *itinerarium* makes you wonder how you would ever arrive in Jerusalem with the help of such a navigational device. *Itineraria picta*, graphical...
representations of routes increasingly replaced the older *itineraria scripta* and took over as the main device for spatial orientation. It seems however that the description of a “tour” has never completely been replaced by description as a “map”. Even in Google Maps the textual directions coexist with geographically realistic forms of representation. Michel de Certeau reports that an investigation into how New Yorkers describe their apartments, found out that 97% of the descriptions are of the type of a “tour”: “You turn to the right and arrive in the living room. Then you pass a small door and ...” [Certeau, 1988, p. 218] According to his source only 3% are of the “map” type: “Next to the kitchen is the maid’s room.” [Certeau, 1988, ibid.] Certeau interprets this observation as a piece of evidence for the predominance of acting versus seeing. The tour would reflect an action - and the map a view of the world.

A map about the surroundings of Norwich's Great Hospital, built in 1290, shows how geographical information was depicted in the 17th century. The topographic information given renders a fair impression of distances, location and orientation. The map shows places as a continuum of buildings, meadows, fields and roads. Even though there is no central perspective rendering the 3D illustration, a sense of realism has been accomplished.

![Fig.: St. Giles Hospital Norwich in a map from 1630](image)

It is however noteworthy, that the map is not a radical *itinerarium pictum*, but a mix of text and image. Street names and names of buildings are placed at the appropriate locations on the map. It also seems that the map loses pictorial representation towards the borders of the depicted area and becomes textual the farther we move away from the centre.
The mixed form of pictorial and textual information seems to be of high practical value if we compare it to forms of pure text (e.g. "Itinerarium a Bvrdigala Hiervsa_lem...") or to exclusively pictorial mapping attempts. An abstract non-realistic map with no words on it, is usefull only to the cartographer himself. It has little value for anyone except for the initiated.

Secret maps, cryptic descriptions of routes and the private notes of game geeks fall into the category of maps with a low level of general transparency. It is however another communality of maps and games that signs need not necessarily be readable by anybody and that hints, ambiguity and delusion is part of the of the game.
The celestial map "Planisphaere coeleste" by Frederik de Wit was targeted at a specialist audience. The map has a perspective of omnipresence, is precise in regard to astronomical distances and shapes of objects depicted and is rich in environment. The clouds surrounding the hemispheres are of a non-navigable character, they provide background atmosphere and aesthetic added value to the map. The same could be said for the elaborate artwork on the astronomical constellations. The etching of the bear, scorpio or lion does not contribute to the cartographic information, it adds however to the look and feel of the map. A nice detail of the map is the methodological discourse displayed as a set of small spherical elements labelled "Hypothesis Copernicana", "Hypothesis Ptolemaica" aso., a brave statement in the 17th century, that accounts for the map maker's political position.

![Celestial Map by Frederik de Wit, 17th century](image1)

A comparison of contemporary computer games cartography to historic maps shall demonstrate that perspective, topography and environment play a crucial role in each of these fields of spatial representation and space-related ideational construction. The map distributed as a survey for the Grand Theft Auto computer game is loaded with environment, i.e. non-navigational information about Liberty City.

![Grand Theft Auto, Orientation Map for Liberty City, 2008](image2)
The map contains hints about celebrities, gangster bosses and power structures, and resembles baroque European maps displaying portraits of the countries’ kings and clerical leaders. The map’s background is another source for environmental information that is not related to the pseudo-geographical form of representation adopted here.

The perspective of the Liberty City map is persuasive of an omnipresent approach, whereas the game itself is obviously an example for vagrant navigation in a fully immersive 3D environment. Quite different in regard to the perspective of the game is Civilization IV, where the player finds himself vagrant and looking down upon a 3D-space, displaying spatial information suggestive of a quasi-central perspective with stereotypical drop-shadows. Environmental, numeric and text information are displayed at the same time.
The spatial concept is interesting as it reminds us of *itineraria picta* and *itineraria scripta* in different sections of the screen. Landmark buildings, mountains and rivers clearly belong to the pictorial realm whereas a line like "57 turns left" could well be taken from the "Itinerarivm a Bvrdigala Hiervsalem." The map that guides the players in Civilization could be taken as a fine example for a discursive system, where Derrida would be expected to detect play. There is obviously gaming in Civilization IV. There are also players, when the computer game is played. In terms of Derridean philosophy there is however another type of play taking place (and time) on a semiotic and cartographic level. Anette Baldauf refers to Derrida’s writing, when she employs him as an advocate against “clean cartography”. [Baldauf, 1997; pp. 141] According to Derrida there is *differance*, an active movement involving spacing and temporalizing. The presence of one element cannot compensate for the absence of the other. A gap or interval remains that escapes complete identity. “Constituting itself, dynamically dividing itself, this interval is what could be called *spacing*; time’s becoming-spatial or spaces’s becoming temporal (temporalizing)” [Derrida, 1972; p.143]

Additional to pictorial and written text information a third mode of providing information about space might claim to be the oldest mode of navigational help for mankind – and the latest step in navsat and computer games technology. *Itineraria dicta*, non-written and non-pictorial, verbal information. Tales of voyages have always been guides for prospective travellers, but with mobile phone technology, navsat devices and game art pieces like Blast Theory’s *Uncle Roy all Around You* the spoken word figures as a navigational tool, that is often supported by graphic information and written words. Locative Games can per definitionem not provide an omnipresent perspective as they are built upon the thrills of disorientation as much as on the challenge for orientation. In the pieces Blast Theory set up, the modes of verbal versus visual geographic representation do not simply coexist in one cartographic artefact, but they are different systems of map-making to be selected by the players. Systems of spatial representation turn into tools to compete with each other. Games like *Uncle Roy all Around You* assign the modes of spatial representation to player groups and turn the systems of orientation into constituting factors of agonistic gameplay.

Fig.: Spoken word tour guides via cartographic navigation in Blast Theory's "Uncle Roy all Around You", 2003
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