

ACKNOWLEDGMENTS

Most of the essays in this volume derive from the international symposium “Media’s Mapping Impulse,” which took place in June 2016 at the Institute of Geography at Johannes Gutenberg-University in Mainz, Germany. Twenty-four scholars from all over the world accepted the invitation of the editors to discuss on an interdisciplinary level the manifold relations between different media (e.g., film, social media, apps, video games), cartography, geospatial technologies and locative media (Tab. 1). From the different professional perspectives of geography, cartography, film and media studies, the question was posed as to how media and maps influence perception and interaction with our everyday world. A central assumption was that mass media in their everyday work permanently create spaces of communication through which meanings, ideologies and power relations are spread. They have an obvious yet subtle mapping impulse: the constant reinvention and mapping of the world in Hollywood films, the localization via media based on *geofencing*, *geo-tagging* or *geocoding*, or the location of a virtual world via social media are just three examples. Essential philosophical questions of the symposium were: How central are media mapping processes for the geographies of our everyday world? When, where, how and why do we arrange things and ourselves in certain orders? To what extent are myths created and transported through media mapping? All in all, the presentations and controversial discussions revealed the complexity of the concept of Media’s Mapping Impulses.

The symposium has produced fruitful results and new opportunities for interdisciplinary, international academic cooperation. All the more reason for us to be pleased that in this volume we are able to bring together some of the conference contributions, as well as some additional essays, which were kindly contributed by distinguished authors. We would like to express our sincere thanks and appreciation to all the speakers, guests and discussants of the symposium for the inspiring dialogs and the success of the event as well as all the contributing authors for the implementation of this anthology.

A large number of people and institutions, without whom the entire project could not have been implemented, were involved in both the book and the previous symposium. We would like to take this opportunity to express our sincere thanks to all of them. We would like to thank the Center for Intercultural Studies and the Internal University Research Funding of Johannes Gutenberg-University for their generous financial support of the symposium. We would like to thank the students of the Master’s program “Human Geography: Globalization, Media, and Culture” (class 2015/16) for their organizational cooperation before and during the symposium, as well as all scientific assistants and employees of the Geographical Institute of JGU for their support. *Media’s Mapping Impulse* represents the sixth volume of the series Media Geography at Mainz. Many thanks, therefore go to Susanne Henkel

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Symposium: Media's Mapping Impulse June 16 th –18 th 2016
<p style="text-align: center;"><u>Thursday, June 16th</u></p> <p>Keynote</p> <p>Tom Conley: Old Maps and New Media: Sentient Geographies</p>
<p style="text-align: center;"><u>Friday, June 17th</u></p> <p>Marcus Doel: On Location – Here and Now, or Modernity Unhinged</p> <p>David Clarke: Memento and the Haussmannization of the Memory – or, The Rat Man's Desinterrance</p> <p>Gavin MacDonald: Two Dutch Landscaped: Art and the Mainstreaming of Geomedia</p> <p>Chris Lukinbeal & Laura Sharp: Scale: (Dis)embodiment, Possession, and Alienation</p> <p>Sam Hind & Alex Gekker: On Autopilot: Towards a Flat Ontology of Vehicular Navigation</p> <p>Johnny Finn: Identity, Space, Media, and Mapping: Media as Vectors for Mapping Social Identities</p> <p>Stephen Buckman: Tracing Shoreline in the Great Lakes Communities</p> <p>Giorgio Avezzi: Cinema and the Crisis of Cartographic Reason</p> <p>Denis Wood: Mapping's Complicated Media Impulse</p>
<p style="text-align: center;"><u>Saturday, June 18th</u></p> <p>Ate Poorthuis & Matt Zook: The Geography and Gaze of the Selfie</p> <p>Gertrud Schaab & Christian Stern: Mobile Map Apps: Toys or Tools?</p> <p>Stephan Pietsch: Cartography and Video Games</p> <p>Paul Adams: Refugee Risk Maps: The Anxious Cartography of Displaced Person Flows</p> <p>Susan Mains: Love in the Time of Cartography: Reimagining Media Narratives of Magic, Mobility and Danger in Colombian Tourism</p> <p>Eva Kingsepp: Relations between Memory Culture and Popular History</p> <p>Teresa Castro: What does the World Picture want? On the History of Spinning Globes, Animated Maps and GIS Imagery in Film</p> <p>Verena Andermatt-Conley: Sentiment and Sediment: A Sensory Topography of Media Archaeology</p> <p>Final Discussion</p>

Table 1: Program of Media's Mapping Impulse

INTRODUCING MEDIA'S MAPPING IMPULSE

Chris Lukinbeal and Laura Sharp

Media's Mapping Impulse is an international and interdisciplinary collection of essays that explores the fundamental relationships between cartography, geospatial technologies, and new and traditional forms of media. The foremost of these relationships is that cartography is one of the oldest forms of media and that media is a type of cartography. Media scholars and cartographers alike have shed light on the tendency for representations to objectify both social *and* spatial relations of power. It therefore makes sense that, to understand the mediation of our socio-spatial world, we find ourselves turning to the seemingly rational and objective scopic regime of cartography to lend a calm and ordered schema to an otherwise chaotic phantasmagoria of images and events. When we consider media – “new” or “old” – through the lens of cartography, we begin to uncover how meaning, ideology, and power are negotiated across space and time in a way that may otherwise be difficult to ascertain. Media, in this sense, is underpinned by what Teresa CASTRO (2009) has called a mapping impulse – a drive to be rendered comprehensible through spatial and cartographic metaphors of topologies, networks, and flows. To pry this idea apart further, it helps to consider what is meant by impulse.

A mapping impulse is the ability of a medium to “shape our understanding of the world and to inform our relationship with the world” (AVEZZÙ 2016, 1), it is a mediation between subject, media, and the world. Media's mapping impulse is “a drive to explore through visual and audiovisual means the diversity of the physical world, the space but also [the diversity] of people and everything else that lives in the world” (CASTRO 2016, 1). An impulse is a sudden, overwhelming feeling that compels the person or object experiencing it to act without hesitation or thought. What might cause such an immediate and unwavering drive to render in explicit, cartographic terms the otherwise implicit spatiality of media and the way we communicate about the world? In this introduction, we suggest that media's mapping impulse is compelled by an anxiety that arises from the need to fill in the uncharted void on the map, a “horror vacui or discomfort at leaving empty spaces” (VAN DUZER 2012, 393).

Horror vacui is a visual arts term developed by Mario Praz to refer to the desire to fill in every blank space of a piece of art. For Chet VAN DUZER (2012), horror vacui helps us understand the positioning of monsters, text, and images on the blank spaces of maps. In this sense, horror vacui is the visual and figurative demarcation of cartographic anxiety on the map, bringing into representational form the subconscious and perhaps unconscious demons underlying the Cartesian drive to document the known world (Figure 1). This anxiety is offset by a mapping impulse of discovery, an impulse to reveal the unknown, map the *terrae incognitae*, and

communicate this discovery to others. This cartographic anxiety not only underlies media's mapping impulse but acts as its driving force. To unpack this claim, in this introduction we examine how Cartesian logic of representation came to the fore with the European Renaissance and the conceptualization of the "world as picture," a mathematical and representational modality of looking at and colonizing the world by rendering it as a series of artifacts and commodities. The Cartesian logic of representation is formulated through Euclidean geometry, gridded space, and scalar techniques that provide a foundation to transform three-dimensional objects into two-dimensional form while maintaining mathematical principles of equivalence and aesthetic principles of realism. Essential to Cartesian representation is the cartographic paradox, which provided the techniques to produce scaled representations of the world through a vertical cartographic view from above (projectionism) and the more subjective, horizontal view of the world from below (perspectivalism).



Figure 1. Robert Walton, *Map of America* (1660) is used by Van Duzer to show the phenomenon of *Horror Vacui* with its decorative flairs, sea monsters, smoking canoes and boast made of Hydas

CARTOGRAPHIC ANXIETY

Cartographic anxiety is a term coined simultaneously by Derek GREGORY (1994) and Sankaran KRISHNA (1994) in reference to BERNSTEIN's (1983) idea of Cartesian anxiety. Richard BERNSTEIN (1983) derived the phrase in a critique of DESCARTES's (1993 [1641]) second meditation in *Meditations on First Philosophy*, which is often referenced as one of the great rationalist treatises of modern times and in which DESCARTES argues that the purpose of human reason is a search for truth. For BERNSTEIN (1983, 27), DESCARTES's quest for a "foundation or Archimedean point" is the "quest for some fixed point, some stable rock upon which we can secure our lives against the vicissitudes that constantly threaten us." Cartesian anxiety is thus the "dread of madness and chaos where nothing is fixed, where we can neither touch bottom nor support ourselves on the surface" (BERNSTEIN 1983, 27). Cartesian anxiety is not just about the fear of being unable to objectively document the known and knowable. Rather, with

chilling clarity, Descartes leads us with an apparent and ineluctable necessity to a grand and seductive Either/Or. *Either* there is some support for our being, a fixed foundation for our knowledge, or we cannot escape the forces of darkness that envelop us with madness, with intellectual and moral chaos. (BERNSTEIN 1983, 27)

In short, Cartesian anxiety is the fear that there is no fixity or basis to distinguish between reason and unreason, a necessity for the existence of Cartesian thought (PAINTER 2008). GREGORY (1994, 72) argues that this anxiety of the strange and alien is not something that is outside amassing at the gates of Reason, but rather is already here, already "constitutively inside" Reason.

GREGORY (1994) argues that cartographic anxiety underlies modern human geography. Cartographic anxiety is the drive to make geographical space legible, knowable, and by proxy, conquerable: to rid the world map of the terra incognita and remove the horror vacui that plagues the discipline. Cartographic anxiety was part of the European scopic regime of the "world as exhibition" wherein, at the closing of the 19th century, the world was increasingly rendered as objects to be viewed (GREGORY 1994; PICKLES 2004). This rendering of a world as exhibition or picture references a very specific type of representation, one that not only relied on mathematics but also positioned the viewed objects as resources for use and capitalization. According to John PICKLES, (2004, 84) the "world as picture" was

projected as *ta mathematica*, as a mathematical manifold. The projection of the world as mathematical was, for Heidegger one of the fundamental ways in which modern metaphysics understands itself and the foundation for the modern sciences and for technology as we know them.

AVEZZÙ, CASTRO, and FIDOTTA (2018, 1) point out that the Heideggerian claim of grasping the world as picture is a "fundamental cartographic problem" that also hides the "picture's performativity or agency as a specific media artifact."

Articulation of the world as picture requires language and as Marcus Doel points out in his chapter, language, and the articulation of meaning through it, is adrift in a "notoriously treacherous terrain" because we cannot separate it, nor remove our self to an Archimedean point to contemplate or represent it. Doel's

examination of semiotics exposes how the sign enunciates meaning and resists articulation of meaning. The relation between signifier and signified is troubled by what Saussure calls a double articulation, or what Lacan calls a resistance or barrier. This resistance, Doel suggests, leaves floating or sliding signifiers struggling in “vain to pin/pen down” their slippage.

KRISHNA’S (1994) interest in cartographic anxiety was for its association with postcolonialism. Here, cartography refers to representational practices that inscribe meaning onto an entity and names it, in KRISHNA’S case, India. He argues that “under such a definition, cartography becomes nothing less than the social and political production of nationality itself” (KRISHNA 1994, 508). Cartographic anxiety, then, is also a symptom of the postcolonial condition wherein identity as a nation is defined by colonization, which is writ large through cartography as the principal means by which to define territory and ownership. Joe PAINTER (2008) argues that what GREGORY (1994) and KRISHNA (1994) evoke through cartographic anxiety are two interrelated logistics of boundary: the epistemic boundary between reason and unreason, and the spatial boundaries produced through cartographic reason and representation. HARLEY puts it more succinctly, saying that “the map is not the territory yet it often precedes and becomes the territory” (HARLEY in WOOD and FELS 2008, 190). As Denis WOOD and Jon FELS (2008, 190) note, “the map is nothing more than a vehicle for the creation and conveying of authority about, and ultimately over, territory. Cartographic anxiety is bound up in issues of “the political unconscious in maps” (HARLEY in WOOD and FELS 2008, 190), issues that underlie how we conceive of, deal with, and stress over territory, (national) identity, and even the survival of the nation. WOOD argues in this volume that maps,

constructed the state, that literally helped to bring the state into being, maps were endowed with their strongest media impulse: they were literally pulsed out into the world to enable citizens and aliens alike to participate in their graphic performance of statehood.

Cartographic anxiety is about clearly defining and delimiting nations on maps and bodies, of producing markers of us and them. This demarcation is central to Paul ADAMS’S essay (current volume) on migration maps and the routes, paths, and lines that bound, shape, include, and exclude refugees seeking asylum in Europe. ADAMS shows how cartographic media are “performances of control,” a matter of regulating the anxiety brought about through the breach of cartographic boundaries. Migration maps in these cases are acting as a medium to communicate international and domestic geopolitical information and imaginaries and serve as a vehicle for practices of inclusion, caring, and belonging, as well as exclusion and xenophobia.

The relationship between the map and the territory is central to cartographic anxiety, deriving primarily from the question of whether there is an ontological relationship between territory and cartographic/Cartesian reason or whether cartographic reasoning is an imposition onto the territory. David Clarke’s chapter on the film *Memento* questions the relationship between map and territory by probing memory, obsessional neurosis, the unconsciousness, the Oedipal complex, and mental maps. In contrast to Fredric Jameson’s aestheticization of cognitive mapping, which illustrates its own cartographic anxiety, Clarke draws from BAUDRILLARD’S invocation of Borge’s fabled tale of the Empire’s decline. In so doing, Clarke shows

that the issue at stake is not a question of precedence between the map and territory, but rather, that something has disappeared: an allegorical residue where the distinction of map and territory can no longer hold “a firm division between ‘things that mean’ and ‘things that are meant.’” In their chapter, Alex Gekker and Sam Hind contend that rather than something lost, or divided, the map and territory occupy the same ontological plane, especially when it comes to self-driving cars. Gekker and Hind suggest that with the advent of driverless cars, the map and territory are no longer distinguishable in the digital age and that through flat ontology everything exists in the same plane with no object being undermined or “overmined.”

Following the logic of Farinelli and Olsson, Avezzù argues in his chapter that cartographic reason was a foundational concept for Western thought. This was reinforced through the cartographic paradox wherein perspectivalism and projectionism normalized the circular logic and self-referentiality between map/territory and presentation/representation. This self-referentiality underlies the practice of turning the map into territory and naturalizes claims of territory through representational techniques. However, Farinelli, similar to Jameson, argues that because globalization undermines cartographic reasoning, it is no longer useful to delimit, domesticate, and territorialize the world. Further, the perpetuation of cartographic reasoning produces and maintains a cartographic anxiety that is reflected in logic, cartography, and cinema where the desire to map the known and knowable spaces of the world run up against the *terrae incognitae* of reason, space, and consciousness. The recent interest in cinema studies in cartography, mental maps, and GIS is embedded in the cartographic logic of mapping out the known world to domesticate knowledge. This is what Avezzù calls the crisis of “cinematographicity,” or the waning ability to grasp the known and knowable world through cinema’s mapping impulse. SHARP (2018), in her analysis of Kurosawa’s *Dersu Uzala*, shows how cartographic anxiety is encoded in the language of cinematic form, necessitating its release through the aesthetic practice of geographic realism (LUKINBEAL 2005, 2006) invoked by establishing shots (LUKINBEAL 2012). SHARP (2018, 90) argues that establishing shots are a fulcrum that orient and reorient the film voyager on their narrative journey. By grounding the audience in a geographically “real” or believable locale, establishing shots assuage the discomfort caused by cinema’s innate cartographic anxiety and place the audience back “in the realm of the knowable.”

THE CARTOGRAPHIC PARADOX

HEIDEGGER’s mathematical view of the “world as picture” is based on two scopic regimes that arose from the European renaissance and traced their roots to the rediscovery of Ptolemy’s *Geography*, which represented a “sudden birth and growth in mapping” (CONLEY 1996, 1) or the “emergence of a new map consciousness” (PICKLES 2004, 96). PICKLES refers to the coevolution of perspectivalism and cartographic projectionism as the cartographic paradox: two related but distinct scopic regimes reliant on mathematics. The paradox that PICKLES refers to is that, although these two scopic regimes arose from the same period and region and informed one

another's development, they each produce very different representational outcomes. To understand these scopic regimes, we should turn back to Ptolemy's *Geography*.

Ptolemy proposed three projection methods to map the world. One of those methods, which was similar to Leon Battista ALBERTI's (1991 [1435]) linear perspective, was distant-point perspective. Samuel EDGERTON (1975, 104) argues that Ptolemy's distant-point perspective was "the first recorded instance of anybody – scientist or artist – giving instructions on how to make a picture based on a projection from a single vantage point representing the eye of an individual human beholder" (EDGERTON 1975, 104). Because Ptolemy's distant-point perspective and ALBERTI's linear perspective both use a single vantage point, they are often considered to be equivalent. Svetlana ALPERS (1983, 138) has suggested, however, that while the two scopic regimes are similar, they also have significant compositional differences: Whereas the "Albertian perspective posits a viewer at a certain distance looking through a framed window to a putative substitute world," the Ptolemaic perspectives "conceived of the picture as a flat working surface, unframed, on which the world is inscribed." Further, while Ptolemy offers the tools for a human-centered perspective, his approach is really about geometric extrapolation:

What is called a projection in this cartographic [Ptolemaic] context is never visualized by placing a plane between the geographer and the earth, but rather by transforming, mathematically, from sphere to plane. Although the grid that Ptolemy proposed, and those that Mercator later imposed, share the mathematical uniformity of the Renaissance [Albertian] perspective grid, they do not share the positioned viewer, the frame, and the definition of the picture as a window through which an external viewer looks. On these accounts, the Ptolemaic grid, indeed cartographic grids in general, must be distinguished from, not confused with, the perspectival grid. The projection is, one might say, viewed from nowhere. Nor is it to be looked through. It assumes a flat working surface. Before the intervention of mathematics its closest approximation had been the panoramic views of artists – Patenir's so-called world landscapes – which also lack a positioned viewer. (ALPERS 1983, 138) (Figure 2)

ALBERTI's theory of linear perspective relied on the logic of a grid but a grid wholly different from the graticule that underlies projectionism. The perspectival view seeks to mimic the optical view of an individual's perspective from one fixed point. Projectionism as a mode of description follows the lineage of panoramic paintings, planimetric landscape profiles, and topographical city views. In these cases, the viewer is presented with a people-less landscape, "where distance is preserved and access is gained" (LUKINBEAL 2010, 9). By removing the viewing subject, projectionism objectivizes the world, turning subject-object relations to object-object relations. In contrast, perspectivalism disassociates the subject by naturalizing the scene as an objective view of reality. In both cases, the dissociation of the subject configures these scopic regimes in dialectic relation with the "real and the unreal ... the body and disembodiment; possession and alienation" (DOANE 2009, 64). The disassociation of the subject from the "world as picture" has been termed the mirror of phallogentrism (ROSE 1995), revealing an embedded gendered logic within the representational process. Further, the window metaphor used in linear perspective allows for a drawing plane on which to produce representations, which Luce IRIGARAY (1985) interprets as the mirror of hegemonic masculinity and Gillian

ROSE (1995, 764) refers to as the inherent interrelationship between “phallogentric subjectivity and its visualized space” (Figure 3).



Figure 2. Joachim Patinir; *Landscape of Saint Jerome* (1516-1517)



Figure 3. Albrecht Dürer; *Der Zeichner des liegenden Weibes* (1512-1525)