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Reflection Essay: *Designs on Signs: Myth and Meaning in Maps*

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Designs on Signs: Myth and Meaning in Maps has led a charmed if unusual existence. All but ignored on publication, its incorporation into a pair of Smithsonian exhibitions, and inclusion in the exhibitions' 'accompanying book', *The Power of Maps* (Wood and Fels, 1992), has given the paper a currency enjoyed by few *Cartographica* articles. Its title in the book, 'The Interest Is Embodied in the Map in Signs and Myths', captures the paper's focus on the interests motivating maps, as well as our conviction that these interests pervaded the map, penetrating to the very level of the marks out of which any map is built.

We wrote *Designs on Signs* during the academic year, 1985–1986. We wrote it in Boylan Heights, in Raleigh, North Carolina, USA, where Denis was on the faculty of the School of Design at North Carolina State University and John was spending a sabbatical year. We had met in the summer of 1984. John had spent the previous ten years developing and teaching the core Design curriculum in the Cartography Program at Sir Sandford Fleming College in Ontario, Canada, and he had short-listed several eastern universities as possible sites for his well-earned sabbatical. The key attraction at North Carolina State University was Denis, known to John through the work Denis had published in *Cartographica*, but the School of Design was well regarded at the time and its Visual Design Program also held some interest for John.

It is probably important to say that at the time we met Denis had only published a commentary and four book reviews in *Cartographica* (Wood, 1980a, 1982a, 1982b, 1983a, 1983b). Though he had long been romanced by maps, Denis was teaching design,

1 landscape history and environmental psychology at North Carolina State University –
2 he had been for ten years – and writing about maps was, at most, a sideline. In fact, by
3 1984 Denis had published far more about film – in *The Journal of Popular Film*
4 (Wood, 1978a, 1979, 1980b, 1980c), *Film Quarterly* (Wood, 1981a), *Literature/Film*
5 *Quarterly* (Wood, 1978b), and so on – than he had about maps; but the reviews he had
6 published in *Cartographica* – passionate, often intemperate – had definitely struck a
7 chord and not just with John. In 1985 Brian Harley, during his post-banquet speech at
8 the Eleventh International Conference on the History of Cartography, was to say, ‘Nor
9 have we welcomed the criticism of outsiders. When a gust of fresh air blows in – as with
10 the bracing polemics of Denis Wood . . .’.

11 ‘Outsider . . .’ It must have seemed that way to people reading Denis’ reviews who
12 knew no more about him than his position at the School of Design, but Denis had
13 completed his doctorate under cartographer George McCleary at Clark University,
14 where fellow students had included Borden Dent, Karl Chang and Barbara Battenfield;
15 and since McCleary had received his doctorate from Arthur Robinson, Denis was
16 anything but an outsider. It was John, despite teaching map design, who was the
17 outsider, for John had come to his position at Sir Sandford Fleming with little more than
18 an undergraduate degree in architecture from Washington University in St. Louis. But it
19 was precisely John’s Bauhaus-orientated designer’s perspective that David Jupe found
20 attractive.¹ Jupe was then pioneering the design-based mapmaking for which Sir
21 Sandford Fleming would become famous,² and John’s background suggested that he
22 would approach map design from an explicitly designer’s perspective, though one
23 grounded in John’s preceding five-year experience as a practicing cartographer in
24 Ontario’s Ministry of Natural Resources.

25 So we were well matched, an outsider who was an insider and an insider who was an
26 outsider, but had John and his wife, Vicki, not been looking for a place to spend his
27 sabbatical, it’s unlikely we would have met. It’s certainly unlikely we would have
28 discovered our mutual interest in semiology, as Denis referred to it, or semiotics, as
29 John preferred to call it, which emerged during lunch the day that John and Vicki visited
30 the School of Design. Amongst other attractions, the prospect of spending a year
31 discussing the semiotics of maps proved irresistible to John, and the following summer
32 he and Vicki returned to Raleigh, renting a house a few blocks from Denis and his
33 family. Shortly thereafter we began a series of weekly meetings to explore the relevance
34 of semiology to maps.

35 We brought different but complementary commitments to these meetings. For the
36 previous few years Denis had been reading everything by Roland Barthes he could lay his
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38 ¹ David Jupe had been Supervising Cartographer in the Cartography Section of the Ontario Department of
39 Geology. In the late 1960s he joined the faculty of the School of Natural Resources at Sir Sandford Fleming
40 College, where he founded the cartography program. John joined the faculty to fill in for Jupe on a 1976
41 sabbatical.

42 ² Fleming students have repeatedly captured the Best Student Award in the American Congress on Surveys
43 and Mapping (ACSM) Competition in Map Design, along with a majority of the Outstanding Achievement
44 and Honourable Mention Awards granted. They have received eleven Canadian Cartographic Association
45 President’s Prizes, and won the CIG Intergraph Award for Computer Mapping five times. See their website
for a complete list of honorees dating to 1981 (www.geomaticsatfleming.ca).

hands on, stimulated by a special issue that *Visible Language* had devoted to Barthes in 1977. Barthes in turn had stimulated Denis' reading of Saussure, Derrida, Foucault and Lacan. Denis' collaborator, the psychologist Robert Beck, was working along parallel lines and the two had already initiated the work which, shaped by their reading of Barthes' *S/Z* (Barthes, 1974), they would subsequently publish as *Home Rules* (Wood, 1994). But until John made the connection, Denis had not been thinking about the relevance of his reading to maps. John had been thinking about ways to systematize an approach to the visual design of maps for some time, thinking that had traversed the formalist traditions to which he'd been exposed as an architecture student where the writings of Paul Klee, Wassily Kandinsky and Johannes Itten were especially important. The 1983 translation into English of Jacques Bertin's *Semiology of Graphics* 'really caught me with my pants down (in the best possible way)', as John said, and he began searching for kindred thinkers closer to home. At first the search turned up little except for a few pieces by Hansgeorg Schlichtmann and Thomas Ockerse, but it was certainly to bear fruit in the meetings with Denis. Catching each other up, and exploring as our conversations dictated, we embarked on an intensive reading programme in semiotics (Morris, Peirce, Eco, Greimas, Barthes, Sebeok), linguistics (Saussure, Jakobson, Hjelmslev), structuralism (Lévi-Strauss, Lacan, Kristeva, Foucault), deconstructionism (Derrida) and phenomenology (Husserl, but especially Merleau-Ponty).

Aside from the excitement of the readings, the great attraction of our meetings was their openness. We had no agenda, no plan, no goal, except that of tackling the problem, as we saw it, of how maps worked, that is, how they did what they did. Our only starting points were a profound dissatisfaction with the way maps were treated in the professional – and popular – literatures, and a conviction that while maps did *not* comprise a language – contra Jim Blaut, Lech Ratajski, Jan Pravda, C. Grant Head and others – maps undoubtedly were composed of signs and did comprise some sort of sign system. Most often the meetings involved the deconstruction of a map or maps that we had brought with us, deconstructions that opened with questions like 'What's this map about?' and 'What's going on here?'; questions that worked their way through ever finer interrogations of increasingly magnified map marks; and questions that closed the hermeneutic circle with, 'So what's *really* going on here?' Weeks later we would return to maps we thought we had squeezed dry, only to wring ourselves through the process yet again, deepening, we hoped, our understanding with each pass. These semiological analyses, these 'close readings', became our fundamental method.

There really was no one map in which we were particularly interested, and the range we explored is perhaps best suggested by the maps we tackled years later in the meetings that would result in our *The Natures of Maps*, placemat maps, advertising maps, illustrative maps, school maps, maps produced by the full range of sciences, from every discipline, all sizes, and of every degree of seriousness. One map that soon appeared on the table was a highway map, the 1978–1979 *North Carolina Transportation Map & Guide to Points of Interest* (Figure 14.1). It was an everyday map but one rich enough – with its inset maps, legend, mileage chart, safety tips, motorist's prayer, and so on – to sustain long discussion, soon enough intensive study, and ultimately a rich text. Though it literally did just come 'to hand when we were casting about for an example',

our choice of this state highway map would come to be seen by some as an ‘attack’ (see below) not only on the map, but on the great state of North Carolina.

There came a point in our meetings when it was clear that we had made some kind of breakthrough, that our analysis of the map as myth, that is, as Barthean myth – which is to say a kind of ‘speech’ better defined by its intention than its literal sense – amounted to a total recasting of the terms in which maps had to be discussed.³ Because myth was a sign system cantilevered from a simpler system of signs, it meant we had to tackle this basal sign system as well, and this necessitated our articulation of the codes maps exploited to unite signifieds and signifiers. Here we depended heavily on Eco’s theory of semiotics, though in working through the ways in which elemental signs were combined into sign systems and greater syntheses we found ourselves thinking through the approaches of Ockerse, Van Dijk, Bertin, John’s formalist avatars Kandinsky and Klee, Merleau-Ponty, Peirce, and others. Once we’d sketched the ten intrasignificant and extrasignificant codes we realized that we had something publishable and we began the drafting, redrafting and re-redrafting of what became *Designs on Signs: Myth and Meaning in Maps*. Denis took final responsibility for the opening ‘myth’ half of the paper, while John took the second ‘meaning’ section in hand, and though the paper is co-authored in every sense of the word, Denis wrote the first half, John the second.

15.1 From Paper to Exhibition

At over forty pages it turned out to be a bear of a paper, with more than 20 000 words and nearly two dozen illustrations. We harboured doubts that anyone would publish such a behemoth, and entertained the possibility that it might have to appear in two pieces, but Bernard Gutsell was the personification of enthusiasm and the piece appeared across fifty pages in *Cartographica*’s Autumn 1986 issue.

Publication was met with . . . resounding silence. Indeed, we’re hard-pressed to recall anyone saying anything about it at all for several years at least. We can suggest a number of reasons for this reception. To begin with it’s a big, fat, difficult paper. Even today, when much of it reads like dogma, there remain whole sections that people have yet to get their heads around. And, then, it was written in a conversational style wholly unfamiliar to readers used to academic prose. It could veer from the slangy to the esoteric within a single sentence and it was scarred by more than one of the ellipses critics loved to hate in Denis’ prose. And who *were* these people foisting this long and radical piece about a highway map – a *single* highway map – on *Cartographica*’s readers? True, Denis *had* published those few reviews in *Cartographica* (and for those who were paying attention in *The Professional Geographer*, *The American Cartographer*, and US and Canadian map librarians’ journals as well) and a piece about the evolution of hill signs. But *it* had appeared in *Prologue: The Journal of the National Archives*, and what

³ Barthes’ idea of the myth also remains a fruitful resource for dealing with map art. See Denis’s treatment in ‘A map is an image proclaiming its objective neutrality: A response to Mark Denil’ (*Cartographic Perspectives*, 2007, 56: 4–16); and the seventh chapter of his *Rethinking the Power of Maps* (Guilford, New York, 2010).

1 cartographer read *that*? And John's students might have been *sweeping up* awards in the
2 annual American Congress on Surveying and Mapping competitions – over the years
3 Fleming students have captured over 80 of the ACSM awards – but his students' maps
4 were not signed with his name and . . . what was Sir Sandford Fleming College anyway?

5 No, we were definitely outsiders and what we were trying to say was . . . *unheard of*.
6 Considering the paper's reception it's important to remember that it was *the very first*
7 salvo in the critical cartography wars. Brian Harley's 'Maps, Knowledge, and Power'
8 didn't come out until the following year, his 'Deconstructing the Map' not until 1989
9 (reproduced as Chapter 17 of this volume). Robert Rundstrom's first paper reassessing
10 mapping amongst First Nations peoples came out only in Rundstrom, 1990; John
11 Pickles' 'Geography, GIS, and the Surveillant Society' only in Pickles, 1991. So, the ideas
12 were new – wholly new to the cartographic community – the authors were nobodies,
13 and the paper was difficult and overly long. It could easily have sunk with scarcely a
14 trace.

15 But then, in the summer of 1990, Denis and his family were vacationing in New York.
16 One morning he called the School of Design in Raleigh to check in and learned that
17 Griselda Warr from the Cooper–Hewitt Museum in New York had called only moments
18 earlier hoping to speak to him. Denis and his son, Randall, strolled across Central Park
19 and presented themselves at the museum where Griselda and Lucy Fellowes wanted to
20 talk about an exhibition of maps they were planning for 1992. Many meetings followed –
21 many experts were consulted – but a year and a half later Denis became co-curator of
22 what became *The Power of Maps*. His role was to shape the exhibition's structure, its
23 thesis, its point; and he built this around the new thinking about the power of maps that
24 he, John, Harley, David Woodward, Pickles, Rundstrom and others had been working
25 out. The show featured more than 400 maps, and Denis turned *Designs on Signs: Myth*
26 *and Meaning in Maps* into its centrepiece, the argument toward which it built, the
27 'polemical zenith' as Chuck Twardy called it (Twardy, 1992). In fact, *Designs on Signs*
28 took over the fifth room where the headline bellowed, 'Whose agenda is in your glove
29 compartment?' (Figure 15.1). In a vitrine in the wall below the headline was a glove
30 compartment sawn from the dashboard of a car. Spilling from the open compartment
31 was a slew of highway maps. Another vitrine was stuffed with North Carolina automotive
32 memorabilia to drive home the paper's contention that the highway map's theme was the
33 'legitimacy of automobility'. A third vitrine displayed a collection of older highway maps,
34 emphasizing the interest oil companies had in producing them. A frieze of North
35 Carolina state license plates ran around the room. The most recent North Carolina state
36 highway map, spread out on a table in the room's centre, was festooned with call-outs
37 that spelled out the paper's argument. On another wall were the alternative maps, North
38 Carolina's *Public Transportation Guide*, for example, that *Designs on Signs* had contrasted
39 with the highway map to nail down the point that, anything but a functional response to
40 a public demand, the map was first and foremost an *advertisement* for the state.
41 These alternative maps, too, were festooned with callouts that helped the room embody
42 *Designs on Signs*.

43 Strongly supported by American Express, the show was a huge success, attracting
44 more than 60 000 visitors. Designed by Pentagram's Peter Harrison, the exhibit
45 garnered no fewer than seven design awards that ranged from *Business Week's* Silver



Figure 15.1 The complexities of the Designs on Signs article reduced to a slogan in the Washington, DC exhibition installation of *The Power of Maps*. (Source: authors.)

Award for Industrial Design Excellence to a Federal Design Achievement Award from the National Endowment for the Arts. The show was the subject of a study by the Smithsonian's Institutional Studies Office. Later published as 'Communication and Persuasion in a Didactic Exhibition: *The Power of Maps Study*', this demonstrated, in the words of later critic Ramona Fernandez (2001), that the exhibit 'was highly successful in transmitting its central abstractions. It is significant that this exhibit caused its visitors to think critically about maps as systems of knowledge constructed out of ideology. A detailed visitor study [over a thousand visitors participated] demonstrated that it, unlike many exhibits, was able to convince visitors of its thesis'. By all accounts the North Carolina room, that is, 'Designs on Signs', was key to making the exhibit's case, a point driven home by the press coverage. If the exhibit as a whole was central, the North Carolina room *hogged* attention. For example, the full page that *Newsweek* devoted to the show was headlined, 'Beware the Glove Compartment', and a nice piece of the highway map was splayed across the centre of the page. Rather than vanishing without a trace, the argument we had made in *Designs on Signs* was becoming notorious.

15.2 From Paper to Book

Amplifying the notoriety was *The Power of Maps*, the book. Very early in 1992, while work on the show was in full swing, Peter Wissoker, then at Guilford Press, asked Denis


1 if he'd be interested in writing a book. Wissoker had originally approached Denis
2 about editing a collection of the then recently deceased Brian Harley's writings, but
3 when it transpired that prior to his death Harley had submitted a collection to Johns
4 Hopkins – published a decade later as *The New Nature of Maps* – Wissoker broached
5 the subject of a book of Denis' own, perhaps to parallel the exhibit (which was not
6 planning a catalogue) and develop the show's themes to a degree not possible on
7 the walls. The book, ultimately described in the show's press kit as its 'accompanying
8 publication', was released the day the show opened and it did indeed parallel the
9 show, room by chapter. Because Guilford was adamant about releasing the book at the
10 show's opening, there was little time in which to write it, and Denis had to plunder
11 things he'd already written, including, as the fifth chapter and paralleling the exhibit's
12 fifth room, all of *Designs on Signs: Myth and Meaning in Maps*, adding John's name to
13 the book's title page.

14 Like the show the book was a hit, becoming a selection of the History, Quality
15 Paperback, and Book-of-the-Month clubs and a best seller for Guilford. It was widely
16 reviewed in both the popular and professional press, was twice translated into Chinese
17 (first in Taiwan, then in Beijing), and remains in print seventeen years after its release.
18 As Jane Jacobs (2003) said a few years ago in an editorial in the *Transactions of the*
19 *Institute of British Geographers*, '*The Power of Maps* was a minor sensation and has been
20 widely reviewed, routinely used in teaching the history of geographical knowledge, and
21 rarely goes without citation in scholarship on the geopolitics of maps'. Other than the
22 book's general thesis that maps express particular views in support of specific interests,
23 and present information selectively to shape our view of the world and our place in it,
24 the most frequently cited material all comes out of the 'Designs on Signs' chapter. Of
25 signal importance remain the map's construction as myth and our articulation of the
26 map codes.

27 *The Power of Maps* exhibition proved popular enough to remount two years later at
28 the Smithsonian on the Mall in Washington. Though most of the original maps were
29 replaced by others, the structure of the original show was replicated and the North
30 Carolina room was essentially reproduced. 'Whose agenda is in your glove compart-
31 ment?' teased the provocative header, this time in type twelve inches high, bright red on
32 a white wall. A subhead in only slightly smaller type elaborated that: 'Even an ordinary
33 map has hidden messages. Denis Wood, co-curator of this exhibition and a resident of
34 North Carolina, shares his reading of maps from that state. You could do the same for
35 your state'. A line below this in still smaller type wondered: 'Must driving be the only
36 way? Between 1945 and 1990, 63 511 people died on North Carolina highways'. More
37 than a rending of the veil, it was a call to action.

38 If journalists liked to play up the 'Beware the Glove Compartment' theme, they also
39 liked to reassure. 'Are road maps really a government plot? Nah', ran the *Newsweek*
40 subhead. The lurid headline reflected Americans' pervasive interest in hidden messages –
41 in plots – while the dismissive question and the 'Nah', reflected their common-sense
42 belief that a road map was just a road map. North Carolina papers were especially prone
43 to handling the story this way. In full caps over a photo of the 'Whose agenda is in your
44 glove compartment?' header from the Washington version of the show ran the title:
45 'Subliminal messages claimed to unfold from state highway map.' The related story was

1 headlined, 'Propaganda in your glove box?' where the question mark alone made the
2 point of *Newsweek's* 'Nah'. But papers elsewhere harped on the theme too: 'Reading
3 between the borderlines', ran the headline of the article in the *Chicago Tribune*, with
4 subheads that read, 'Flexible truth', 'Maps reveal more about the mapmaker than about
5 the terrain' and 'Not accurate for long'. 'Exhibit reveals global agendas', ran a subhead in
6 the *Washington Times*.

7 Without exception the 'global agendas', 'flexible truth', 'propaganda' and 'subliminal
8 messages' were construed as laid *on top of* an otherwise straightforward truth: at bottom
9 maps remained reliable representations of reality, no matter that a superficial gloss
10 might be able to *twist them* into serving *special interests*. ed, attention turned on
11 these *special* interests, since *common* interests tend not to be thought about as interests at
12 all; and since *everybody* shares such interests, what could it matter that they're socially
13 constructed? From this perspective, our reading of the state highway map came to little
14 more than 'a celebration of [our] own pet peeves', as William Burpitt complained in a
15 letter to the editor of Raleigh's *News and Observer* (Burpitt, 1993). From Burpitt's
16 perspective the argument *we'd* advanced – in which it is interest alone that motivates
17 mapmaking, *common interest especially* – crumbles, to be replaced by one in which, at
18 worst, factual maps might be distorted by special interests. This argument was made
19 with exceptional forcefulness – if also some confusion – by Helen Bunn in another letter
20 to the *News and Observer* Bunn, 1994:

21
22 Liberals are indeed a strange breed. NC State University professor Denis Wood claims
23 that North Carolina's highway (not cycle) map 'advanced a specific political agenda',
24 while the map actually 'is intended to show the highway system and to promote our
25 state', according to state cartographer Clarence Poe Cox, who overseas [sic] the
26 production of the map.

27
28 Later in the article the truth comes out. Wood's criticism is 'based on the 1992 map
29 issued by former Republican Governor Jim Martin's transportation department
30 rather than on the newer version produced under Democratic Governor Jim Hunt'.
31 It appears to me that Wood also has a specific political agenda. Is it now politically
32 correct for the pot to call the kettle black?

33
34 Promoting North Carolina as a 'leisure paradise' in my view is not misrepresentation –
35 it's a fact. From the mountains to the sea, North Carolina is the greatest state in the
36 greatest nation on Earth. It is evident that Wood feels no loyalty toward North
37 Carolina, so it must not be his home state.

38
39 Where are Jesse Helms and Lauch Faircloth? Readers should have called on them to
40 demand the removal of this partisan exhibit from the Smithsonian's Ripley Centre.

41
42 Only *special*, indeed only *partisan* interest is objectionable, but *it* suffices to justify the
43 removal of the exhibition! In being attacked by letters to the editor, *Designs on Signs:*
44 *Myth and Meaning in Maps* had come a long way from being an unreadable article in a
45 marginal professional journal.

It has a way to go too. The 'Designs on Signs' chapter of *The Power of Maps*, updated and split into two, will be the only piece of *The Power of Maps* carried forward into the book's second edition. Why? Because no matter how we have come to think about maps, no matter the future of maps themselves, they will always be embodied in signs; and, for this reason alone, semiological analysis will always be necessary, not just interesting but *essential*. Our analysis of the propositional logic of the map – as laid out in our recent *The Natures of Maps* (Wood and Fels, 2008) – assumes, simply takes for granted, the semiological arguments of 'Designs on Signs'. Though in *The Natures of Maps* we may dissolve the map's surface into the atomic propositions we call postings, these postings *have to be realized in signs*. If we devote less than one of the book's 230 pages to 'Map Logic and Its Semiotic Expression', this is only because we'd already laid that part of the argument out, you know, back in 1986 . . . across fifty pages of *Cartographica*.

Further Reading

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- Bertin, J. (1983) *Semiology of Graphics: Diagrams, Networks, Maps*, University of Wisconsin Press, Madison, WI. (Bertin introduced semiotics to mapmakers with this seminal text which remains, despite its age, indispensable.)
- Casti, E. (2005) Towards a theory of interpretation: Cartographic semiosis. *Cartographica*, 40 (3), 1–16. (Casti argues that a semiotic approach de-emphasizes the map as mediant to emphasize it as agent.)
- ~~Denis, W.~~ and Fels, J. (1992) *The Power of Maps*, Guilford Press, New York. (Embedding 'Designs on Signs' in this book made clear the power of a semiotic analysis to reveal the mythic character of a wide range of maps, especially when allied to other forms of analysis.)
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- Wood, D. and ~~John~~ Fels, J. (2008) *The Natures of Maps*, University of Chicago Press, Chicago. (Here the semiotic analysis of 'Designs on Signs' has been wed to a non-representational, indeed propositional characterization of the map.)
- Wood, D., Fels, J. and Krygier, J. (2010) *Rethinking the Power of Maps*, Guilford Press, New York. (Here a truly propositional map logic is founded on the semiotic basis laid in 'Designs on Signs'.)

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Author Query

1. Au: This reference (Wood, 1981b) is not clear in the text.

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