CE N’EST PAS LE MONDE.
They're maps!

A semantic cloud of 319 definitions of "map" larger words appear more often in the definitions than smaller ones. Seems like everyone has defined a map. Let's check in with the experts.

A map is a portrayal on a plane of the surface of the earth or some larger or smaller portion of it.
Max Eckert

So it's a portrayal?

A map is a representation of the milieu.
Arthur Robinson

So it's a representation? (What the hell is a milieu?)

A map is an image proclaiming its objective neatness.
Bing Wood

So it's an image?

Maps are way too abstract to be portrayals or images. Representation is a fancy word that bogs us down in ontological quibbles, but let's take a closer look at it anyway.
Pauline Rosenau describes six kinds of representations. Where do maps fit?

Delegation: "One individual represents another in Parliament." Maps don't seem to be this kind of representation at all.

Resemblance: "A painting represents on the canvas what the painter observes." Maps are not views; they show us heavily transformed observations. Some maps on maps sort of look like stuff in the world, but are very abstracted and generalized.

Replication: "The photograph (image) represents the person photographed (object)." If maps replicate (echo, copy) the world, they do it in a highly modified manner. In no way like a photo. Indeed, the power of a map comes from the fact that it doesn't just replicate the world.

Duplication: "A photocopy represents the original." If you tip a huge copy machine over onto the world and hit "COPY" you don't get a map.

Substitution: "Lawyers represent their clients in court." In doing so, lawyers literally "take the place" of their clients. They act for them, speak for them, and make decisions for them. Though maps may advance proposals on behalf of those who own or control territory, the maps in no way substitute for the territory. You cannot build on the map, mine it or bulldoze it.

Are maps representations at all?

No way! But there is a way to think about maps that's more responsible and more useful... especially if you are making maps.
I HAVE A PROPOSITION FOR YOU...

THIS SHOULD BE GOOD...
and thinking through the problem in this way makes it highly questionable whether there is any sense in which maps are representations.

Maps are propositions. Maps are propositions in graphic form. Technically a proposition is a statement in which the subject is affirmed or denied by its predicate, but this is precisely what a map does, affirms the existence and location of its subjects. This is there, the map affirms, again and again and again.

The map’s affirmation is almost uniquely robust. It says, of let us say a house of worship, that, first of all, a house of worship is a thing that exists. We call this the precedent existential proposition: this (a house of worship) is. Many maps advance existential propositions in their legends. “House of worship,” such legends say, and next to the words they place the mark ♦.

Maps affirm more, however, than the existence of a conceptual category. Here, maps say, is an instance of such a thing, and here is another, and here are others still. What makes the map’s affirmation so ringing is the implicit challenge: “You don’t believe it? Go check it out!” This instantiation of the precedent existential proposition is the fundamental cartographic proposition: this is there. We call the fundamental cartographic proposition a posting.

The posting has a logical form which is essential to observe. Just as the posting affirms the existence of the this, so it affirms the existence of the there. The there is the instantiation of the precedent existential proposition, there is. That is, the posting conjoints two precedent existential propositions, this is and there is, to give us this is there and, equivalently, there is this. Once posted, the this takes on thereness, a quality of being somewhere, as the there takes on thisness, a quality of being something.

The map’s implicit challenge is not simply to find an instance of a this or a there, but to find that this is there precisely where there is this.

Most maps consist of hundreds, even of thousands of postings. Small scale maps may consist of hundreds of thousands of postings. Postings are organized by the map’s propositional logic which dictates how postings may be manipulated in the construction of the map’s higher order propositions. As atoms are combined into molecules, so postings are combined into higher order postings; as molecules are decomposed into their constituent atoms, higher order postings are likewise. At the atomic level, a map may post a house of worship, a school, and a street, and at the molecular level post a neighborhood and a city (that is, affirm the propositions that neighborhood and city are and are there). Similarly a map posting a city and a neighborhood may post a street, a school, and a house of worship. This relationship permits the conveyance of authority from one level to another.

Maps may post things that don’t yet exist (as of proposed roads), or things that have ceased existing (as of ancient Rome), or that are outside the realm of existence (as of Middle-earth). One map may post a thing here that another posts somewhere else. Frequently maps propose the existence of things to which is assent is given (the Great American victory in Iraq), but from which it is said that which new propositions are advanced (the things posted on maps – at both atomic and molecular levels – on the social assent vouchsafed them, and their location.

It follows that precision.

KRYGIER FOUND WOOD’S ESSAY ENGROSSING, BUT FELT THERE HAD TO BE AN EASIER WAY TO SAY IT...
Maps are Propositions.

You have choices.

The proposition of this subdivision plat is that the Boylan plantation becomes streets and houses.

This historic preservation map proposed that Boylan heights should damn well stay the same.

This traffic map proposed that traffic in Boylan heights was getting to be a pain in the ass.

This jack o’lantern map proposed that in Boylan heights people with means carved pumpkins, while those without means didn’t.

Each map propositions you with a different Boylan heights. Many maps of the same place... yet none is Boylan heights.
MAPMAKERS PROPOSITION YOU WITH VERY DIFFERENT REALITIES

THIS IS NORTH INDIA.

NO, INFIDEL. THIS IS NORTH INDIA.

THIS IS WHERE CARIBOU CALVE IN ANWR.

NO, TREE HUGGER. CARIBOU DON'T CALVE IN ANWR.

Caribou Calving Areas
Arctic National Wildlife Refuge (ANWR)

% Chance of Being High Density Calving Area

0% 1% - 24% 25% - 49% 50% - 75%

A U.S. GOVERNMENT EMPLOYEE WAS FIRED FOR LEAKING MAPS OF CARIBOU CALVING AREAS TO THE PUBLIC.

CONFLICTING PROPOSITIONS ABOUT THE APPALACHIANS.

THIS IS WHY THE APPALACHIANS ARE.

NO, SORRY, ROCKHEAD, THIS IS WHY THE APPALACHIANS ARE.

This map, from the 1940s, proposed that the Appalachians were a geosyncline uplifted by isostatic forces.

Caribou Calving Areas
Arctic National Wildlife Refuge (ANWR)

% Chance of Being High Density Calving Area

0%

Which side are you on? Florence Reece, 1931

This map, from the 1940s, proposed that the Appalachians were part of a Pangean orogen terminated by a continental collision.
CONFLICTING PROPOSITIONS ABOUT THE RANGE OF PIN OAKS.

NO, HERE BE PIN OAKS!
MUNNS, 1938

NO, HERE BE PIN OAKS!
LITTLE, 1949

NO, HERE BE PIN OAKS!
LITTLE, 1971

NO, HERE BE PIN OAKS!
USDA, 2006

PIN OAKS ARE HARD TO PIN DOWN!

SO HOW DO MAPS WORK TO PROPOSITION YOU?

NO, HERE BE PIN OAKS!
ZIM & MARTIN, 1952

NO, HERE BE PIN OAKS!
ZIM & MARTIN, 1956

NO, HERE BE PIN OAKS!
BROCKMAN, 1979

NO, HERE BE PIN OAKS!
DUNCAN & DUNCAN, 1988
YOU TAKE A CONCEPT...

HOUSE OF WORSHIP

YOU ATTACH IT TO A MARK...
AND YOU PIN IT DOWN.

40.03°N, 83.01°W

BY DOING THIS OVER AND OVER, MAPMAKERS BIRTH WORLDS, AS HERE THE CLINTONVILLE NEIGHBORHOOD IN COLUMBUS, WITH ITS CHURCHES, SCHOOLS, AND TIDY STREETS.

OTHER MAPMAKERS, WITH OTHER CONCEPTS ATTACHED TO OTHER MARKS, PROPOSITION YOU WITH OTHER CLINTONVILLE.

GOPSS
DEMS$

THIS ISN'T CLINTONVILLE.

2004 ELECTION POLITICAL CONTRIBUTIONS IN CLINTONVILLE.

Black People
2000 Census
Total Clintonville Population = 20,000

1
3
5
7
9

THIS ISN'T CLINTONVILLE.
BECAUSE MAPS ARE PROPOSITIONS, YOU MUST ACCEPT RESPONSIBILITY FOR THE REALITIES YOU CREATE WITH MAPS...

...WHETHER YOU'RE MAKING MAPS, USING MAPS IN YOUR WORK, OR JUST HAVING FUN WITH MAPS.

JUST BECAUSE THE REAL WORLD CAN'T BE CAUGHT BY A MAP DOESN'T MEAN WE CAN'T MAP THE REAL WORLD... AS MANY WAYS AS WE WANT TO.

NOW THAT'S A PROPOSITION!
Maps and Mapping was Eckert’s principle intellectual heir, dominating cartography in the second half of the twentieth century. As built, the neighborhood realized this proposal. Reproduced from the Book of Maps 1885 (p. 114), Wake County [North Carolina] Registry.

The sixth chapter of Pauline Rosenau’s Post-Modernism and the Social Sciences: Insights, Journeys, and Reflections presents her understanding of the post-modern attack on representation. That her argument is fundamentally reactionary makes it the more pertinent for our purposes here, a succinct and encompassing survey of what people mean by representation. Our reactions to her suggestions draw on a range of sources including Richard Rorty’s Philosophy and the Mirror of Nature (Princeton University Press, Princeton, 1979); Nelson Goodman’s Ways of Worldmaking (Hackett, Indianapolis, 1978); Michel Foucault’s The Archaeology of Knowledge (Pantheon, New York, 1972); and Paul Feyerabend’s Against Method (New Left Books; London, 1975). We are also indebted to Andrew Pickering’s The Mangle of Practice: Time, Agency, and Science (University of Chicago Press, Chicago, 1995), and I. B. Harley’s The New Nature of Maps (Johns Hopkins University Press, Baltimore, 2001).

[1] Ce n’est pas le monde is an experiment in rethinking maps and discourse about maps: a proposition about maps as propositions and about comic books as academic discourse in the form of a collage of propositional maps. We created “Ce n’est pas le monde” in June 2006, with Comic Life software, presenting it at the Critical Geography Mini Conference (Columbus, Ohio) and the North American Cartographic Information Society (Madison, Wisconsin), both in October, 2006, and the Geography and Humanities Symposium (Charlottesville, Virginia) in June, 2007. Comments received helped us bring it to its current form which we hope recalls the alternative comics that emerged in the 1960s [see Charles Hedgcock, Alternative Comics: An Emerging Literature, University Press of Mississippi, Jackson, 2005] while at the same time profiling from Scott McCloud’s comic-book reading of comics through the lens of C. S. Peirce’s semiotics [in McCloud’s Understanding Comics, Kitchen Sink Press; Northampton (MA), 1993]. In particular, McCloud exploits Peirce’s understanding of icons, indices, and symbols (see Alan Manning, “Scott McCloud – Understanding Comics,” IEEE Transactions on Professional Communication 41, March 1999, pp. 60-69).

[2] We are far from the first to argue that maps are not representations but propositions (for example, see H. B. Acton, “Man Made Truth,” Mind, New Series 47(186), 1938, pp. 145-158, or, to allude to René Magritte’s Treachery of Images (1929-28), his famed painting of a pipe inscribed, “Ceci n’est pas une pipe.” Our map here, Boylan Heights, Raleigh, N.C. (1908), by Boston landscape architects Kelsey and Guild, literally proposed Boylan Heights as a place, since before the building of the houses and the moving in of the residents, this map was the sole form in which Boylan Heights existed. As built, the neighborhood realized this proposal. Reproduced from the Book of Maps 1885 (p. 114), Wake County [North Carolina] Registry.


[4] The propositions advanced by Boylan Heights Traffic Volume (1981), from Wood’s unpublished Dancing and Singing: A Narrative Atlas of Boylan Heights, are that traffic flowed through Boylan Heights in the volumes indicated. The argument advanced was that the traffic played a profound role in the neighborhood’s life. The study of arguments was first given rigorous treatment in Aristotle’s Organon. That Aristotelian syllogistic logic presupposed the more fundamental logic of propositions was established in the 1880s in the work of Cantor and Dedekind, subsequently the calculus of propositional logic. We are attracted to the calculus of propositions because, as Bertrand Russell put it, “A proposition, we may say, is anything that is true or that is false,” and “The propositional calculus is characterized by the fact that all its propositions have as hypothesis and as consequent the assertion of a material implication” (Principles of Mathematics, Second Edition, Norton, 1912, pp. 45-46).


[7] The language of comics constitutes one of our richest and most important resources for thinking about maps as propositions (see Carolyn Handa, Visual Rhetoric in a Digital World, Bedford/St. Martins, Boston, 2004). Visual rhetoricians ask questions like how and why we argue visually, how we understand the myriad visual arguments aimed at us, and how we ourselves can become better at visual arguments (also see Andrea Lundord and John Ruskakiewicz, Everything Is an Argument, 4th ed., Bedford/St. Martins, Boston, 2006, especially the chapter on visual arguments). Visual rhetoric also makes strong links to semiotics and related approaches to understanding and interpreting diverse visual materials, art, advertising, comic books, photographs, graphs, house plans, and maps (see Charles Hill and Margaret Helmers, Defining Visual Rhetoric, Lawrence Erlbaum, Mahwah NJ, 2004). The idea of visual expressions as arguments, indeed as propositions, runs throughout the visual rhetoric literature. Comics studies are newer, but already an interdisciplinary field with conferences, journals (The Comics Journal, International Journal of Comic Art, Image & Narrative, and ImageText, the latter two online), academic centers (for example, at Michigan State, Ohio State, and Bowling Green State Universities), and reflective texts (in an already enormous literature) on the visual rhetoric of comics: Ideology, Power, and the Critics (1989), Inge’s Comics as Culture (1990), Gordon’s Comic Strips and Consumer Culture (1998), Dierck and Lefevre’s Forging a New Medium (1998), Carrier’s The Aesthetics of Comics (1999), Pustz’s Comic Book Culture (1999), Carrier’s The Aesthetics of Comics (1999), Varnum and Gibbons The Language of Comics (2001), Wright’s Comic Book Nation (2001),
Heer and Worcester's *Arguing Comics* (2005). Academic acceptance of comics studies was in large part driven on (and exemplified by Scott McCloud's *Understanding Comics* (op. cit.), a comic book about comics as academically sound as it is approachable. McCloud’s work in comic book form (including his subsequent *Reinventing Comics* [Paradox Press, New York, 2000], and *Making Comics* [Harper, New York, 2006]) established the fact that the comic form can work as intellectual discourse, a visual intellectual discourse. A case for geographers engaging comic books, at least at an interpretive level, has been made by Jason Dittmer who situates research on comic books as part of a broader interest in the visual components of popular culture (“The Tyranny of the Serial: Popular Geopolitics, the Nation, and Comic Book Discourse,” *Antipode* 39(2), 2007, pp. 247-268; but also see his “Captain America’s Empire: Reflections on Identity, Popular Culture, and Post-9/11 Geopolitics,” *Annals of the Association of American Geographers* 95(3), 2005, pp. 626-643). Our proposition about the comic as an appropriate form of academic discourse (like textual articles, or verbal presentations) raises many questions. What is wrong with the visual that makes it so inappropriate as formal academic discourse? Why do scholars who study the visual (maps) express themselves primarily with text/words? Could a comic, a map, or any other largely non-textual expression be considered appropriate as academic discourse (without the need to use notes, like these, to explain everything with words?)

[11] Like the traffic map, the pumpkin map is from Wood’s unpublished *Dancing and Singing: A Narrative Atlas of Boylan Heights*, although this particular map has been previously published, where the argument it advances is made explicit in a comparison with a map of some of the contents of the Boylan Heights neighborhood newsletter. See Katherine Harmon’s *You Are Here: Personal Geographies and Other Maps of the Imagination* (Princeton Architectural Press, New York, 2004, pp. 104-107). You can also hear Wood make the argument in a radio interview with Ira Glass on *This American Life* (archived at www.thislife.org, selected maps from the Boylan Heights atlas can be found at the Making Maps blog: makingmaps.net).

[12] Each map proposes a different Boylan Heights, which is precisely why the atlas Wood has been working on will contain over a hundred maps of the neighborhood, though it would take thousands more to really begin to close in on something that, in the end, can never be caught.

[13] Each map proposes a different “Kashmir.” Maps of disputed territories are very easy to accept as propositional maps, because “everyone” acknowledges that boundaries and territory are human constructs.

[14] Each map proposes a different region of caribou calving in the Arctic National Wildlife Refuge. A rogue U.S. Government employee placed maps of alleged caribou calving areas in the Refuge on his web site. The official U.S. Government position was that caribou calving in the Refuge is not well understood, and should not be publicized. It also denied that the employee who created the maps was an expert on caribou calving. There is thus no “official” U.S. map of caribou calving in the Refuge.

[15] One of the reasons it’s important to show these maps is because “hard science” is so often the redoubt of choice for those defending the representational character of maps. “Sure,” they say, “that may be true of national boundaries or in political squabbles, but those aren’t scientific maps.” But “scientific” maps are not a whit less propositional. When Wood took geology in college isolastic rebad was the argument advanced for the uplift of mountains. A generation later this notion makes even less sense than it did when it was written in the 1950s, but still popular in the 1970s. It is indeed his definition of a sign is a generalization of Peirce’s, which Cherry distinguishes, “by the requirement that a sign must be capable of evoking responses which themselves must be capable of acting as signs for the same (object) designation” (p. 220). In the latter sense, a comic is not a sign.

[16] Here eight propositions, from a multitude, about the range of the pin oak. See the exhaustive discussion of these range maps in Wood and Felt, op. cit., pp. 146-163.

[17] Here we enter the realm of the sign since, after all, the posting is constituted of a sign on the cartographic sign plane. But the fact that the comic form can work as intellectual discourse, a visual intellectual discourse. A case for geographers engaging comic books, at least at an interpretive level, has been made by Jason Dittmer who situates research on comic books as part of a broader interest in the visual components of popular culture (“The Tyranny of the Serial: Popular Geopolitics, the Nation, and Comic Book Discourse,” *Antipode* 39(2), 2007, pp. 247-268; but also see his “Captain America’s Empire: Reflections on Identity, Popular Culture, and Post-9/11 Geopolitics,” *Annals of the Association of American Geographers* 95(3), 2005, pp. 626-643). Our proposition about the comic as an appropriate form of academic discourse (like textual articles, or verbal presentations) raises many questions. What is wrong with the visual that makes it so inappropriate as formal academic discourse? Why do scholars who study the visual (maps) express themselves primarily with text/words? Could a comic, a map, or any other largely non-textual expression be considered appropriate as academic discourse (without the need to use notes, like these, to explain everything with words?)

[18] Here we’ve attempted to evoke the plane of expression, the graphic potential, the field of marks, the domain of signifiers, or of visual images (in describing the signifier as a “sound-image” Saussure revealed his focus on speech and language), more successfully we feel, since this realm is material to begin with.

[19] Presumably these signs lead to some kind of action. Why else make signs, why else advance propositions, unless to affect the behavior or state of another? Without this motivation it is hard to understand why people would make, publish, and disseminate maps. The sign theorist who made this point must straightforwardly was Colin Cherry who defined a sign as a “transmission, or construct, by which one organism affects the behavior or state of another, in a communication situation” (*On Human Communication*, MIT, Cambridge, 1957, p. 306). Contrast his definition of a sign with those of de Saussure, Barthes, and Eco that the just gave. It’s as though they came from different worlds, which in a way they did. Although written in the 1950s his text was little noticed in English, but indeed his definition of a sign is a generalization of Peirce’s, which Cherry distinguishes, “by the requirement that a sign must be capable of evoking responses which themselves must be capable of acting as signs for the same (object) designation” (p. 220). Peirce’s form an essential part of his idea of logic – his approach was philosophical not linguistic like de Saussure’s—and his sign, was “something which stands to somebody for something in some respect or capacity” (Charles Hartshorne and Paul Weiss, eds., *Collected Papers of Charles S. Peirce*, Harvard, Cambridge, 1933-35, Vol. 2, paragraph 228, but see also 227, 231, 303, and 418). Peirce distinguished three triadic semantic relations of significance, of which the second triadism of the sign consisted of his famous icon, index, and symbol (which we referred to earlier), *ad infinitum* (almost literally, since Peirce identifies sixty-six classes of signs). No matter how deep we dive we won’t be finding many points of contact between Peircean and Sausssrian signs, nor between Cherry’s somewhat individual transformation of the Peircean sign and the Saussrian sign. (In fact the only connection between Cherry and de Saussure that we finally know is that we can point to is their joint appearance in a few paragraphs of Jakobson’s “Linguistics and Communication Theory,” where Jakobson is explicitly attempting a wedding, in fact a shotgun wedding, which didn’t take, in *Structure of Language and Its Mathematical Aspects; Proceedings of Symposia in Applied Mathematics* 12, American Mathematical Society, Providence, 1961, 245-252). It’s too bad, because the Saussrian sign lacks the motivation of Cherry’s sign, and Cherry’s sign desperately needs de Saussure’s clarifying and simplifying formalism. Meanwhile analytic linguistic speech-act theorists like J. L. Austin are in a third world altogether, which again is too bad, because Austin’s efforts at understanding what one is.
doing in saying something – especially his concept of the performative (yes, it originated here) –
would be so much more valuable if they ever made contact with communication theory and/or
semiology (but see Austin’s terrific How To Do Things With Words, Oxford, Oxford, 1962).
Understanding how maps work – and how they accomplish work – really requires Peirce’s and
Cherry’s motivation, de Saussure’s sign, and Austin’s performativity.

[20] The differences in motivation behind these two additional propositions about Clintonville
reflect a resident’s critical perspective of the gentrifying, stereotypically progressive 1920s
neighborhood in the city of Columbus. The map of political contributions reveals that a few
Republican donations are as large as many Democratic donations. This suggests the need for debate
about campaign financing based on the imbalance of wealth. More to the point, the map proposes
that, within one of the most progressive neighborhoods in Columbus, there are a handful of wealthy
Republicans who may be held partially responsible, from a local perspective, for the diverse failures
of the Bush administration. Stop by and ask them how they justify their financing of the
administration. The map of black residents of Clintonville proposes that the progressive residents
think about the fact that racial diversity in the neighborhood is low. Clintonville is typical of
progressive, gentrifying neighborhoods, where the politics are loud but the “practical” worries about
property values and schools – code words intimately tied to race – trump politics. Both maps
actively propose action – as with the topographic map that precedes them, engaging neighbors about
the effects of their political contributions and addressing the contradiction of politics and diversity.
Ce n’est pas une pipe, c’est une pipe.

JOHN KRYGIER & DENIS WOOD

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JMKRYGIER@OWU.EDU