

Practical Map Rhetoric

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ABSTRACT

This is an exercise in direct application of theory to practical map making concerns. Map making is the main vehicle for dissemination of geographic information, and it is likely to remain so. It has been proposed that all maps are rhetorical; which is to say that all maps forward some argument or other to an audience, but how can a rhetorical model of cartography assist in the composition of a new map, and conversely, how can this model work in analyzing and understanding these and other maps? In this talk we will briefly examine one map of a common map type, a map not necessarily usually thought of as rhetorically based. In a deconstruction of the rhetorical grounding and operation of this example, we will explore the utility of viewing every map as a persuasive construct.

INTRODUCTION

The case for the centrality of rhetoric to cartography is clear, but not always well understood, recognized or acknowledged. “Maps”, Mark Monmonier wrote, “... are authored collections of information” [Monmonier 1991]; a view echoed by Philippe Rekacewicz, when he wrote that: “A published map is a complex, subjective message offered by an author to his readers... [that] has to be read in a clear-headed and critical manner.” [Rekacewicz 2000]. The general run of opinion though, seems to take these statements in stride; as if the “little white lies” of a map are naïve and artless, and thus nonexistent.

Little could be further from the truth. Any map is a calculated rhetorical construct based upon an understanding of what is needed, readable, and acceptable to the user, whoever that user is envisioned to be. The only reason any map is made is to show some-*one* some-*thing*, and that *thing* is a composed, parochial view of some situation or milieu. If the map is perceived by the user some-*one* as unneeded, as unusable, or as unbelievable, it will not be used and will have failed. It is even possible that the map might not be recognized as a map at all. The *only* way for the map to be recognized and to function as a map is for it to persuade that user someone that it is a map, that it is a map that can be used, that it is the map that is needed, that it is a map that is true. In short, it must convince the user that it is the right map.

Common to all maps, regardless of who composes them for what audience, for whatever reason, are the requirements of *usefulness*, *usability*, and *desirability*, as defined by the audience community itself. These requirements, and the means of satisfying them, are quite outside all concerns with map data. Data is important, but by itself is nothing but an undifferentiated soup of factoid, without form or meaning: unreadable, unrecognizable, and without a useful, usable or persuasive form; useless. It is only in the choice of information, the readability and understandability given the information, and the seeming plausibility of the presented information that the map is made. The editorially chosen information is rendered into a form recognizable as readable, understandable and plausible by conformation to a conventional context: we call this context a map. That conventional context has been defined by a particular interpretive community: the intended user. What is identified as a real, normative, and legitimate map by one interpretive community may be seen as strange, inadequate, or not a map at all by another. The map is rhetorical because it must successfully address itself to its audience.

Implicit in this rhetoricity is an aspect of performance: the map must function as a map is expected. It is in use, and only in use (however broad, intense or limited that use may be) that a map attains an identifiable state of *map-ness* (of being a map). The map’s performance as a map is activated by a user’s response to the rhetorical appeal forwarded by the map. There are three participants in the map performance: the map maker (or issuer), the map user (the addressee), and the map itself (the address or argument), and of the three it is only the map itself that actually engages with either of the others. Meaning in a map, as in any instance of human communication, is negotiated by the parties to that communication in the intersection between the values invested in the work by the maker and the values brought to the work by the user. The maker makes the ‘best’ map s/he knows how, while the user makes the most of what s/he finds. The assumption, not necessarily always correct, is that the coin of the exchange is of a mutually agreed value. Since

only the map is present in both sides of the exchange, it is up to the map itself to persuade each party it is up to the job. The rhetorical argument, framed by the map maker and received by the user, is delivered by the map.

PROCEDURE

It may not seem obvious how this theoretical framework is applicable in day to day practice. The purpose of this paper is to investigate how we can discover the rhetorical arguments forwarded by an existing map, with a view to understanding what basic arguments must be framed in constructing a new map. We will investigate this by putting a series of questions to a particular map, and evaluating the answers the map provides. We will, in fact, invite a map to perform, but in a self reflexive manner; one usually masked by the ostensive “intended use”.

We know that the requirements common to all maps are *usefulness*, *usability*, and *desirability*, and these requirements frame our questions:

1. What is the subject of the map?
2. What is the voice with which the map speaks?
3. How is this map made useful?
4. What is the argument forwarded by the map?
5. What is the purpose of the map?

INTERROGATION

We will try putting these questions to a particular map, the Caura River AquaRAP [Figure 1]. It is a relatively small map, about eight by ten inches, in colour, that appears in the published scientific report of the CI / CABS Rapid Assessment Program expedition it depicts [Chernoff, et.al. 2003]. This map was not chosen for any particular reason save that it was handy, not overly complex, and of a convenient size. It is certainly not being held up as an example of perfect, or even adequate, map making or as expressing any opinion whatsoever on the quality of the map or its suitability or fitness for any particular use. Any map could have been chosen: only specific anecdotal details of the discussion would vary.

We should also be clear about what we can expect from our queries. A map is not, as we well know, a self contained repository of meaning, but is instead a text to be read in the light of assumptions brought to it and read into it by the reader. The observations Stanley Fish made about poems can be applied to maps: “each new reading is elaborated in the name of the [map] itself, but the [map] itself is always a function of the interpretive perspective from which the critic ‘discovers’ it” [Fish 1980].

I will be both posing the questions and negotiating the answers, and the answers I find will say as much about me as about the map. It is, however, the primary business of any map to take part in just this sort of negotiation with who ever happens along. Every potential user interrogates the maps offered for use, and both poses his or her own selection of questions and interprets the negotiated answers. It is the negotiation aspect of a map’s performance that is to be examined, and who is negotiating what is merely anecdotal.

What is the subject of the map?

In other words: - *To what use should this map be fit?* The subject of the map is the location and itinerary of the expedition. Simply and succinctly put, this map must be fit to show *where*. How this is accomplished will be dealt with in question 3, in the light of the answer to question 2.

What is the voice with which the map speaks?

What we want to know is: - *Who is making an address to whom?* The requirement here is to put forward a face. The maker of the map has got to clearly understand who the person or entity issuing the map is, and how they both see themselves and wish to be seen (bearing in mind that these three may or may not be identical). Similar things need to be understood about the addressee(s); who they are and how they see themselves, what they value, and how they will respond to the face put forward by the issuer.

The issuer in this case is Conservation International (CI); an international, non-profit organization, based in Washington, DC, dedicated to biodiversity conservation [<http://www.conservation.org>]. More specifically, the issuer is the Center for Applied Biodiversity Science (CABS) [<http://www.biodiversityscience.org>]. CABS is the science wing of CI, and is the hub of CI’s scientific and technical operations. One of the premier field science programs in CABS is the Rapid Assessment Program (RAP), whose mission is to assess the biological and conservation value of tropical

freshwater ecosystems, and to report findings quickly in authoritative scientific publications. Key concepts in this presented face are science, authority, thoroughness and competence.

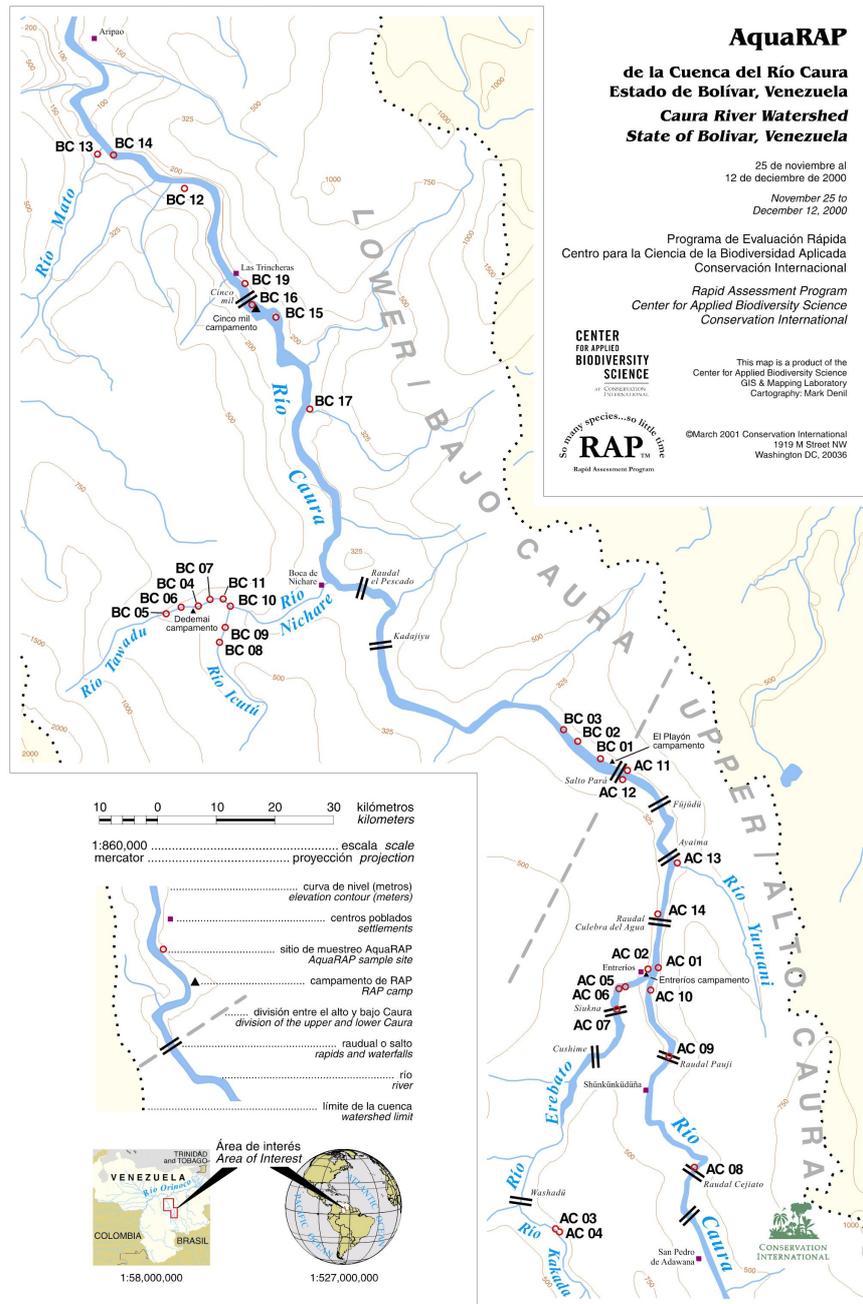


Figure 1: map of the Caura River AquaRAP

RAP reports are scientific publications; they detail methodologies, report findings, catalog samples, discuss results, and present recommendations. The reports are addressed to local policy makers and conservationists, to international funding agencies, and to scientists. This is quite a heterogeneous group of target users; each of these groups have different reasons for referencing the reports, each has an agenda of priorities, and each makes its own demands. Sometimes the reasons, priorities and demands are unique, other times overlapping, and sometimes seemingly opposed.

These audiences will also each have certain expectations about what a believable map will be, and these expectations will be grounded in assumed ideological contexts so deeply ingrained that individual audience members are likely not

self-consciously or particularly aware that the assumptions are ideological. Every member of each of the various user communities 'knows' what a 'good map' is, even if their 'good map' is not 'good' to some or any of the other groups. The collective expectations of a user community forms a horizon of what is recognizable and acceptable as a map. and thus, to be recognized, accepted and believed as a map, each particular map must appear against, and be situated in, this horizon.

Glancing through the pages of the journal *Science*, which is targeted at scientists (who make up one part of the Caura River map's audience), one can usually discover several remarkably crude and obscurely constructed maps: the very crudity of the map is an appeal to the expected users. The authors of the articles know from training and experience that appearing to pay attention to presentation might make their work appear 'frivolous' to their colleagues; a serious liability in their profession. Thus, while crudity is not necessarily a positive signal in itself to that community, an anathema to over elaboration translates into a fetish-ization of what might seem to be its opposite. What I have described as "crudity", and what is prized as 'plainness' or 'directness' by an interpretive community identifying itself as 'scientists', only illustrates my point about the need to address user communities and the complexities of addressing several simultaneously.

We now have a both subject and an addressee, and have also clarified the issuer's position. The identifications of who is presenting the map, to whom the map is addressed, and what is to said by the map to the addressee, frame the answers to the next questions.

One can imagine a situation where the characters of the issuer and addressees are unproblematic; both parties know and (think they) understand each other. If the relationship, however, seems unproblematic, (that, is, that everything seems self evident) it may only be because the map maker has internalized the ideological paradigms (that is, the shared assumptions) of the targeted interpretive communities so completely that the address his or her map makes seems to all parties natural and literal. The map produced appears the very embodiment of objective meaning to the naïve map maker and user.

Obviously, though, meaning is not resident in the map itself, but is brought to the map by the user. While a naïve map maker might have a long and 'successful' career, and a map user might get everything s/he wants and needs from a naïvely read map, a sophisticated map user or maker (that is, one cognizant of the central rhetorical nature of the map) is better prepared for challenging tasks and achieving consistent, non-accidental results.

How is this map made useable?

Here we must anticipate *What questions are likely to be put to this map, and how will this map be able to answer?* The aspects that make the map usable are the way access is afforded to the information, and it is through the designed affordances that someone can reach into the map and grasp that which is needed from it. Usability is the facilitation of use, and use is, as we know, central to the map's existence. It is in the affordance of use that the map maker can frame and guide the uses to which the map is put, and can set the parameters for desired readings of the map.

At the most basic level of map usability are the types of issues that have long made up the core of cartographic training curricula: cartographic 'basics' or 'fundamentals'. The plethora of cartographic textbooks throughout history, from Ptolemy, through Imhof, to Krieger and Wood, have dealt with these 'nuts and bolts' issues, and they need not be retailed here. At a higher level, however, the affordance of usability is the map maker's main means of ensuring orthodox (map maker intended) reading, and discouraging subversive (that is, actively contrary), or simply mistaken, reading.

The map maker directs reading by employing conventions and techniques that are either already familiar or are so closely similar to familiar paradigms as to be easily explained (and are, in fact, explained). Familiarity is, of course, defined by the interpretive communities to which the users belong: the map must be locatable in that horizon of what is recognizable and acceptable as a map by that group. Now while these communities are not homogenous, and not mutually exclusive, and while any individual may and likely does belong to numerous interpretive communities, there still always exists a group to be addressed. The map elements that afford access are the 'tropes and figures' of the map's rhetorical address.

I am not going to catalog and separately evaluate each affordance of usability this map employs; that would take quite some time and would no doubt be a bit tedious. I can, though, point out some of features I identify as affording access: contours, land color in verses out of the watershed, the site locations, locations of the waterfalls and rapids, the bold dividing line between the upper and lower watershed, the legend, and its manner of construction, the provision of regional and hemisphere key maps, the selection of low value colors for contextual and large area symbols, and the

contrasting selection of dense colors for small and point features, the title, giving the date of the expedition, the use of two languages on the map, with contrasting type faces for each language, the scale being given both as a representative fraction and as a graphic bar, that the data is projected and that the projection is named and parameters given, and that geographic control is provided, that the labels make use of a type hierarchy, that the map is book page size and oriented for easy reading, that it employs color printing. None of these, or any other features of the map are unique or innovative in themselves, or in any way unusual. That is not why I point them out. Rather, it is to the rationale for their presence as handles for rendering the map usable I would draw attention.

What is the argument forwarded by the map?

What should this map be stating clearly? The central argument forwarded by the Caura River AquaRAP map is twofold. First, that this is a reasonable representative sampling of a region significant for its biodiversity, and that the sampling was carried out in a systematic, scientifically controlled and competent manner. Secondly, the map forwards the argument that the CABS RAP team is a scientifically qualified, professionally credible, thorough, and competent to undertake this survey and demonstrably capable of producing a complete, authoritative, scientific report on its findings, a report worthy of confidence.

It should be noted that the two arguments are complementary: the map (aims to) state clearly that ‘This is true, and you know it is because you can believe us’. The map, as it stands before the user and appeals to her / his credulity, always makes this kind of double-barreled statement about the ‘facts’ and the ‘speaker’ even when the anecdotal details of the instantiation vary. A different audience might lend its belief to a differently fronted ‘speaker’, even when the ‘facts’ are the same: in that case a (somewhat) different map would be required.

What is the purpose of the map?

The purpose of the map is closely tied to the subject, to the voice with which we want it to speak, with who we expect to use the map, and with the way we expect them to use it. Strictly speaking, the purpose is to deliver the argument, but more than that the purpose concerns questions of why should any argument (or any information) be forwarded at all?

The Caura River AquaRAP map serves the purpose of locating, framing and delineating the sites and boundaries of the AquaRAP expedition, and of framing the manner and tone for the presentation of the findings and recommendations presented in the RAP report. Most readers of the report will not be familiar with the Caura River, and even those that are will probably find the map a better, more accessible, means of understanding the spatial relationships and context than textural descriptions or geographic coordinates. Beyond these very basic reasons lies the findings of the expedition itself.

The Caura River watershed area is a part of the Guayana Shield and is one of the most pristine watersheds in South America. The AquaRAP results indicate that the Caura is a very healthy area with high aquatic biodiversity. Out of 174 fish species collected, 69 were found in the upper-Caura, which triples the number of fish species known by science to be in this area. Scientists have identified almost 400 species of plants, 87 species of aquatic insects, 3 species of mollusc, 3 species of annelids, 5 species of shrimp and 4 species of crab including one (*Fredius stenolobus*) which is endemic to the Caura River Basin. If this area, currently gazetted for protection, is, as is expected, granted protected status, it will put Venezuela over the 50% protected threshold. Coincidentally, this area faces an immediate threat in the form of a major hydroelectric project planned for the Salto Pará waterfalls.

A significant difficulty in detailed analysis of this sort is the very openness of the map as a text: this map, and any map, is fully prepared to take part in a negotiation of meaning with anyone who happens along. This openness is itself one aspect of the map’s rhetorcity.

We have to remember that rhetoric is not, as Plato makes Gorgias say, “The art of making the worse case seem the better”, but is, rather, as Isocrates wrote: to “educate the ignorant and inform the wise”. All maps are rhetorical, and many, or most, (and maybe, the Caura River map) are quietly, skillfully persuasive in such a manner that in fact one never really notices the map’s parochial stance, but one instead finds one’s views slowly molded and lead to some position. Maps are rhetorical because they do not simply provide information, but by selection, presentation and contextualization effect the movement of the will.

CONCLUSION

We have seen how an understanding of any map as a rhetorical entity is central to existence and function. Whether we are dealing with an existing map or a map being planned out for execution, a clear and succinct grasp of the underlying

rhetoricity is essential to facilitation of evaluation of what one has or of what one must make. Maps can be, and certainly have often been, made and used in naïve ways, but that is only because the rhetoricity is taken for granted, and is thus invisible to the participants . We are each of us members of one or more interpretive communities of map readers; each of these communities expects to encounter specific features or configurations composing what each will accept as a “good map”. It is a mistake, however, to believe in the universality of one’s own parochial view: to believe, that is, that what qualifies as good for oneself, or for one’s client, is good for everyone.

One should not be surprised if this seems to be exactly what any cartographer does every day, because it is in fact exactly what a cartographer must do in order to make 'successful' maps. The successful map maker knows, from experience or training (or both), what the client wants and expects. Even those maps made 'only for money' are dependant on convincing an audience: The client that pays the piper calls the tune, but only pays if he likes the music. If the maps made were not persuasive of their suitability, the map maker would soon be unemployed.

Some may accuse me, in asserting that the primary character and function of the map is to persuade, of ignoring or obscuring ‘the map itself’ and replacing the map with the user’s interpretation. Such an interlocutor might ask: How can persuasion be at the core of *all* maps; from a scientific, explanatory, or thematic map through a benign topographic map down to a lowly business locator map? Obviously, though, our interlocutor himself brings quite a parcel of assumption and preconception to the map; how else could he or she sort out identifications of these various map types? Look again at the adjectives employed in the interlocutor’s question: scientific, lowly, benign (*benign*??); all are indicative of subjective, interpretive judgments. In fact, even the application of a categorical label (for instance: thematic, topographic, or business) to any particular map is every bit as subjective a choice, regardless of the breadth of popular agreement for the judgment. The judgment itself, however, and the fact that the choice is judgmental, is not the point. Everyone *must* make these sorts of judgments every day, whenever one reaches for a map. It is a mistake, however, to take one’s own interpretation (even if ‘everyone knows’ it is right) for ‘reality’; interpretation remains interpretation and is *all* that is available to the map user.

In each and every case the maps, all maps, each and every single map, (once recognized as a map) must stand for examination and persuade the user that it is a map that is needed, a map that can be used, and a map that is believable. Only then can it begin to function. The questions I have used in this article can help to expose the assumptions that serve to frame the map as the editorial judgments they are. The questions are not presented as a formula for map making, but as a way of exploring and coming to understand the nature of map function and of the map making activity. It is a nature that incorporates, includes, and unifies the technical, cultural, and informational elements that intersect in the map.

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