

COMMENTARY

Edited by EDWARD H DAHL

The recent publication of *Art and Cartography: Six Historical Essays* has elicited a lengthy, spirited commentary by Denis Wood. We print it below, followed by an equally spirited reply by David Woodward, editor of the volume. The issues debated are much more profound than ones this book might have been expected to raise.

ART AND CARTOGRAPHY : SIX HISTORICAL ESSAYS / edited by David Woodward. Chicago ; London : University of Chicago Press, 1987. xvi, 249 p., [32] p. of plates : ill. (some col.), maps (some col.). (The Kenneth Nebenzahl, Jr., lectures in the history of cartography). ISBN 0-226-90722-8 : US\$65.

So pretty – even handsome – is this volume that there is little pleasure in unveiling the emptiness of its pretense to substance; but too little is taking place beneath its carefully tended skin to justify even *it*, let alone the anticipations its seductions raise in the willing reader. Certainly the book has heft (as at better than two and a half pounds it ought), and a dust jacket palpably heavy and luxuriously coated (it is that of an art book from Kodansha or Abrams). The text *is* attractively laid out and blessedly easy to read, and among the lavish illustrations – 193 halftones and 32 *pages* of color – there are even a couple we haven't seen before. Or perhaps I exaggerate – but if so only to the more quickly to make the point that we have seen this book before ... many, many times.

And there *is* something of another age about *Art and Cartography* – something of the sense of the history of cartography *as it used to be*, even as recently as a decade ago, when, in fact, this collection of essays must have been conceived – as though the book were a fossil, a relic embalmed in the increasing quantities of time consumed by the act of publication. But even in 1980, when the essays were presented at the Newberry Library as the Sixth Series of Kenneth Nebenzahl, Jr., Lectures in the History of Cartography, they were already antiques, bearing about the same relationship to shifts in thinking about the history of cartography as did – to instance an example given by Ulla Ehrensvärd in her contribution to this volume – Rand McNally's use of wax-engraved plates fifty years after the introduction of scribing. But even relics have their merits, and if this volume does no more than enable us to discern the early settlement patterns of a landscape of scholarship being rapidly developed, it will not molder on the shelves in vain.

If only because this scholarly terrain was pioneered by the great collectors and their keepers, it continues to exhibit the effects of their long tenure, not only in the collections, their catalogues and the early histories that constitute the monuments to this first phase, but also – and far more insidiously – in attitudes and orientations that are proving, as *Art and Cartography* all too poignantly demonstrates, resistant to change in even those cases where the necessity for doing so is openly acknowledged. Three of these are particularly unyielding: the emphasis on collectable maps; the importance granted display over analysis; and the commitment to connoisseurship at the expense of theory and history. *Art and Cartography* is exemplary in each regard.

For instance: to be collectable an artifact must be available (neither ephemeral nor inaccessible), numerous (no matter how desirable one-of-a-kind things are,

they are not collectable), and yet uncommon (else, as a matter of social realities, there is little point to the collecting). With respect to maps these criteria have excluded as collectable: sketch maps (too ephemeral) and those that have ended up in state archives (too inaccessible); incunabular, archeological and ethnographic maps (too one-of-a-kind); and printed maps of recent times (too common). Collectable maps have therefore proven to be, in general, those printed in Western Europe during the 15th through 18th centuries, not at all coincidentally those comprising the subjects of such classic compendia as Nordenskiöld's *Facsimile-Atlas*,¹ Tooley's *Maps and Map-Makers*,² and Skelton's *Decorative Printed Maps of the 15th to 18th Centuries*,³ to say nothing of such modern compilations as Tooley and Bricker's *Landmarks of Mapmaking*.⁴ *Art and Cartography* slips itself into this scene with the ease of the habitué. Whatever the disclaimers voiced by its editor as to the intelligence and continued utility of associating the 'art' of cartography exclusively with what conventionally had been understood as its decorative (because collectable) phase, no less than 70% of its illustrations are of maps and related artifacts produced in Western Europe during the 15th through 18th centuries, 63% from the 16th and 17th centuries alone, with most of these coming from Italy and the Netherlands, that is, the principal sites of the southern and northern renaissances in European painting. Only 7% of the illustrations are of non-European subjects; and only 2% of them are non-Western, a figure which generously includes a recent Western rendering of the plan of Angkor Thom. One is grateful for the color reproduction of even a portion of the Han military map of 168 BC., but this is bought at the pain of an otherwise excruciating *deja vu*. Nor is it merely that one is subjected to the usual douche of Ptolemy and Mercator, Ortelius and Hondius but that, for example, the Lorraine from the 1513 Strasbourg Ptolemy here reproduced in color as Plate 14 was reproduced in color only twelve years ago as the frontispiece to *Five Centuries of Map Printing*,⁵ an earlier Nebenzahl Lectures series from the same editor and publisher; or, again, that both Ritter's monochromatic 'Oberfläche van Europa als ein Bas-Relief dargestellt' and von Sydow's equally monochromatic 1855 *Orographischer Atlas 'Europa'* – here reproduced in color – appeared to great advantage in black and white only five years ago in the same publisher's *Early Thematic Mapping in the History of Cartography*⁶ (and, in fact, the von Sydow reproduced here does not illustrate the figure discussed in the text, for at least in my copy there is no green tint on the lands of any elevation); or, again – ...but this is silly.

Yet to even allude to these products of the 19th century is to give a false impression, for *Art and Cartography* is all but completely devoted to selected maps of the European renaissance and its baroque exfoliations, pointedly in the pieces by Samuel Edgerton (recensing his much superior *The Renaissance Rediscovery of Linear Perspective*⁷), Svetlana Alpers (represented by a chapter previously published in her *The Art of Describing: Dutch Art in the Seventeenth Century*⁸), Juergen Schulz (on map mural cycles of the Italian renaissance) and James Welu (on the sources of ornament on 16th and 17th century Dutch maps); if only by the way in the articles by Ulla Ehrensward (chronologically-ordered trivia about map color) and David Woodward (on map lettering in what is easily the best piece in the book). Thus it is not merely that it *feels* like we have been here before, we *have* been

here before, *have* seen these images before (many times in some cases), *have* read these phrases before (*I have written these words before*), those of Edgerton and Alpers all but letter for letter, those of Schulz and Welu on tediously similar if not identical maps and cartouches, even many of Woodward's in his earlier *Five Centuries of Map Printing* and *The All-American Map*.⁹ Why *again* these maps *toujours vu*? Did so few other peoples produce maps worthy of attention? And if so, *that* would be worthy of attention, that would begin to suggest avenues into a *history* of cartography (via its connections to the rise of national states, say, not as serendipitous fortuity, but as mutual influences in nets of casual relations – a theme encouragingly pursued in the Nebenzahl Lectures, Eighth Series, especially interestingly in James Vann's work on the Austrian Hapsburgs – or via its connections to the rise of capitalism, or to other aspects of social history). Did not even the Europeans make maps at other times? Even at this time, did the Dutch and Italians really produce so narrow a range of cartographic artifacts, all but inevitably small-scale maps of regions, of continents, of the world? (And the answer is patently *no* – they produced staggering quantities of estate plans, town and city plans, battle plans, county and other maps.) Or is it merely ... *that none of these were artful?*

This would seem to be the crux of the matter, the point at which the great collectors return to haunt the labor of their progeny, in hidden assumptions about the nature of 'art', hidden because never discussed (but always asserted), never discussed because it is the second obvious feature of the scholarly landscape of the first phase to value display more highly than analysis, to prefer affirmation to proof and demonstration. This is evidenced not only in the (necessary) facsimile projects and specimen books, but in this of Woodward's from his introduction to Skelton's *Maps: A Historical Survey of Their Study and Collecting*:

Those who attended Dr. Skelton's first lecture will recollect that it was illustrated with many slides of maps highlighting the history of cartography since the Middle Ages. As many of these maps have already been reproduced in Dr. Skelton's *Decorative Printed Maps ...* in Leo Bagrow's *History of Cartography ...* and in other general works, it seemed needless to include them in the first edition. However, in response to a widely held opinion that books about maps and map collecting should contain illustrations of maps, the publishers have permitted the inclusion of eight representative illustrations in this second edition.¹⁰

Should contain illustrations of maps? It is as though the map were an icon in whose luminous presence it were sufficient to stand in order to be ... *what?* Inspired? Awed? Satisfied? It becomes a matter of faith (and *Art and Cartography* and iconostasis): one believes or one does not. In this regard Welu and Ehrensward are the most orthodox, but none among the authors is nailing any heterodox opinions on the door of Our Church of the Decorative Map of the European Renaissance. Even Woodward, not given to gratuitous opinionating, can be found saying, "This style heralded the baroque deterioration of letterforms in which the spare and beautiful chancery became overbearingly ornate and fussy. Compare, for example, the work of Mercator in figure 6.15 with the late style of Natale Bonifacio in 1591 (fig. 6.16)," and though I compare like mad, and can certainly see the differences,

I remain unconvinced about the ‘deterioration’ and would be willing to bet that few of Bonifacio’s contemporaries felt his late style half as ‘overbearing’ as they found Mercator’s frumpy and *démodé*. Yet this brandishing of unarticulated values is as nothing compared with that of Welu who concludes his appreciation of Dutch pasticheurs with this ringing affirmation of plagiarist appropriation: “Tailoring this borrowed imagery to their individual needs, these cartographers produced maps that must be considered among the most beautiful from the golden age of decorative mapmaking,” where the tailoring – as Welu exhaustingly illustrates – consists of little more than tracing and trimming the work of others. I must confess to failing to understand what is so laudable in this, just as – when confronted with the grotesquerie that is Hondius’ large world map of 1611 – I have to confess to a lack of admiration (unless we are to acknowledge no difference between an excessively decorative object and one that is no more than excessively decorated).

It is here that the preference for display most savages any claim to intellectual respectability the history of cartography might like to make, for not only does Welu not attempt to unfold the significance of any of the individual embellishments of which he displays no less than thirty-six (compare this with George Hersey’s sensitive and illuminating readings of the Luigi Vanvitelli vignette and the Vincenzo Ré frontispiece in his exegesis of Carlo di Borbone’s *Caserta*¹¹), but he makes no attempt to explain what the manic borrowing itself might have been about, not pausing even for the possibility that it might have been at the service of sales, that Hondius and Visscher might have been, in some important sense, 17th century Lee Iacoccas ‘styling’ their ‘product’, though he does let slip a “By enlarging and embellishing Hondius’s early seventeenth-century map, Visscher produced a more appealing item for the contemporary market,” or two (but for a valuable recent treatment of the pressures of print on 18th century savants see Alvin Kernan’s *Printing Technology, Letters and Samuel Johnson*¹²). The very last thing Welu wishes to entertain is the likelihood that this wholesale expropriation of decorative and frequently irrelevant clip-art iconography (“The full meaning of Hondius’s cartouche has yet to be explained,” apologizes Welu, but as though there were an actual mystery to penetrate instead of an empty bubble to pop) signalled, not the proximity of art and cartography, but their growing separation during precisely the period in which our modern notions of what constitute the fine arts were first taking shape. Nothing, in any case, could be sillier than imposing post-*Encyclopédie* (essentially Romantic) notions of art on an age in which, as Ehrensward has shown, the coloring of maps was likely to be situated in the to us nonexistent realm between ‘The Painting of the Ancients’ and ‘The Dying of Cloth, Silk, Horns, Bones, Wood, Glass, Stones and Metals,’ neither far from ‘The Painting, Colouring and Beautifying of the Face.’ While Alpers makes it clear that there existed a “pleasure in representation itself” that knit together the impulses behind both Dutch painting and mapping, Welu makes it equally certain that the self-confident purpose expressed by a Vermeer or a Rembrandt was not felt by a Visscher or a Hondius, and that, for reasons it would be valuable to explore, the latter felt compelled to dress up in finery borrowed from the former, producing in this way neither the folk art we associate with larger scale maps of

estates and church lands, nor the high art we associate with the great painters, but a kind of middlebrow pop art (even kitsch, for I gag at the notion that elaborate cartouches are a litmus for art of any kind).

Folk art? Pop art? High art? It is not clear to me that the notion of art underwriting any of this book is sufficiently subtle, sufficiently tempered in the fires of social history, to permit these sorts of distinctions. The little attention devoted to the issue is sophomoric. Art is simplistically opposed to science: it is said to be synthetic, creative, whereas science is analytic and reportive. Or it is linked to individual effort (thus excluding film, opera). Or it is lost in an embarrassing collation of names like Munro, Neoplatonic, Osborne, Poussin and Santayana. Or whatever is said (as in the introduction) is traduced (as in the texts). Instead of striving for a universalism beyond its grasp, the book would have been better served by a less pretentious title. *Small-scale Italian and Dutch Cartography of the Renaissance and Its Involvement with Selected Aspects of Prints and Painting* would have been more to the point (better served its connoisseurship), and though the book would have been no better, it would have been less objectionable. It also might have begun the retreat from the silly idea that cartography is compounded of equal parts art and science – concepts far too empty to compound anything out of – and signalled the advance into a history of cartography that conceives of the field not as straddled across an ever-widening gap between the creative and reportive, but accepting of the historical reality of its ever-shifting ties to whole networks of human tasks and orientations, here to painting (through a shared involvement with representation), here to war (through its provisions of battle plans), here to mathematics (through its concern with space), here to language (generating the categories of cartographic attention), here to the graphic arts (through a shared reproductive technology), where each of these related disciplines is likewise construed as no more than a continuously shifting node in a network embracing all of human culture – not Art and Science, but all the related arts and sciences. This is what I mean by a lack of history, not that we don't know the date of every map ever produced by man – connoisseurship excels at precisely this – but that the dates aren't used to unmask the modes by which the map propels and is propelled by human social instrumentalism, just as, while we labor to nail down the exact referent of each and every map mark, we fail dismally to construct any theory with which to weave understanding out of them.

A theory necessary to any appreciation of the map is that of representation (especially if we wish to articulate the map's relationship to the other representational arts), a nontrivial problem in which is color (how does it work? what does it do?). Even an author as craftily as Alpers slips up here, in the process passing the palm of *descriptio* south to the Italians:

At a first level such colors have a symbolic value: they distinguish between various aspects of the earth for our eye – sea is blue, land tan. Though they signify, they need not be descriptive. Vermeer's *Soldier and Young Girl Smiling* in the Frick Collection (fig 2.8), with its pointed reversal of the actual colors of sea (here tan) and land (here blue) clearly makes this point.

What is appalling is not her just observation that color need not be descriptive (except of difference) in order to signify, but her naiveté that it could ever have been descriptive of the *actual* color of anything. There is no need of a semiotics for a more sophisticated perspective; one need only to turn to Leonardo da Vinci as cited by Ehrensvärd:

The surface of rivers is of three colors, namely light, medium and dark. The light part is the foam which is generated, the medium is when the water reflects the air and the dark is in the shadows of the waves. This dark part appears green.... If the water takes on the blue of the air in its high lights then the shadows appear green and to a certain extent dark blue.

Nonetheless, Ehrensvärd's notion of 'associative coloring' is as hopeless as Alpers' 'descriptive' coloration. While Ehrensvärd might be on slightly firmer ground when speaking of the associative coloring of geologic maps (where, in the end, the rock could be ground for the pigment), she steps into a quagmire of preposterousness when she asserts of the mid-19th century:

By now, the end of the era of hand color on printed maps, the lingering traces of mystical color symbolism, so important in the cartography of the preprinting period, have dwindled to the merest vestigial remnants. High standardized associative symbolism (blue for water, red for towns, green for trees, etc.) has come to characterize the representation of the most common map features.

where I am not alone in choking, not on the idea that water is blue (though let us admit once and for all that water is colorless; that in streams, rivers, ponds and lakes it is almost any color but blue; and that, except in the rare cases of mineral coloring, when it *is* blue it is thanks to the blueness of the sky), but rather that there is a non-mystical association between cities and the color red: all map color is equally conventional, and if the connoisseurs can say when which color appeared on what sort of maps, it is inevitably the historian who is going to open the doors on what any of them might mean:

A superficial glance at any of the beautifully coloured pen-and-wash maps drawn up, mostly in the 1760s and 1770s, by the disciples of Trudaine, *ingénieurs des Ponts et Chaussées*, emphasizes the sweeping patches of dark green that spread around the outer flanks of the liver-shaped city, itself touched out in a delicate pink, with light lime greens for the extensive parks and gardens, lilac grey for the network of streets and with the Seine a blue ribbon winding through the centre in a great south-westerly curve, before heading once more toward the north. The patches of dark green ride ahead of the deeply marked paved highways, like alarming outriders, as the roads fan out toward the corners of the kingdom. Yet this embracing patchwork of dark greens is as reassuring in its delicacy and its neat everydayness, as the delightfully-drawn squares and rectangles indicating vineyards and orchards that also crowd in a confused medley of colours on the perimeter of the coloured city.

But nothing could in fact have been *less* reassuring, once these conventional colours had

been translated into the reality of stark winter forest, the branches cracking like alarming reports in the deep frost, or of thick summer coverage, the foliage threatening the prudent traveller, as he walked or rode, preferably in company, well to the middle of the road, with the almost felt presence of those who watched through thickets and brambles. The highroads were but uncertain, fragile frontiers between huge areas of primeval jungle; and the pretty colours of the cartographer's palette tell us nothing of the snakes lurking within, of the wild pigs and wolves, or ancient trees, covered in stifling ivy or magic mistletoe, of the mutilated, half-devoured bodies lying in thickets, sometimes a few paces from the King's military roads.¹³

If Richard Cobb is right here (and he's convinced me that he is), the terrors of this world were all too well known not to have been part of the world of the map colorists as well; and if this is true, then these colors really *meant* something, and not just 'trees here' and 'city there', but *civilization* everywhere. They constituted a way of reasserting over a world of chaos and fear some semblance of at least one image of civility, became crib colors, as it were, for a sty of brawling adults, or reassuring talismans for a world perpetually on the brink of disaster.

My data will not take me where I want to go with this, but with all the data in the world the authors of *Art and Cartography* do not seem to have been terribly interested in getting anywhere. Given their lack of interest in writing history and building theory, in carrying out analysis and making demonstrations, this cannot be the occasion for much surprise. Given the éclat of this volume, however, it will always be the occasion for deep regret.

¹ Adolf Erik Nordenskiöld, *Facsimile-Atlas to the Early History of Cartography, with Reproductions of the Most Important Maps Printed in the XV and XVI Centuries*, Kraus Reprint, New York, 1961.

² R.V. Tooley, *Maps and Map-Makers*, Batsford, London, 1949.

³ R.A. Skelton, *Decorative Printed Maps of the 15th to 18th Centuries*, Staples, London, 1952.

⁴ R.V. Tooley and Charles Bricker, *Landmarks of Mapmaking*, Crowell, New York, 1976.

⁵ David Woodward, editor, *Five Centuries of Map Printing*, University of Chicago Press, Chicago, 1975.

⁶ Arthur H. Robinson, *Early Thematic Mapping in the History of Cartography*, University of Chicago Press, Chicago, 1982.

⁷ Samuel Y. Edgerton, Jr., *The Renaissance Rediscovery of Linear Perspective*, Basic Books, New York, 1975.

⁸ Svetlana Alpers, *The Art of Describing: Dutch Art in the Seventeenth Century*, University of Chicago Press, Chicago, 1983.

⁹ David Woodward, *The All-American Map*, University of Chicago Press, Chicago, 1977.

¹⁰ R.A. Skelton, *Maps: A Historical Survey of Their Study and Collecting*, University of Chicago Press, Chicago, 1975, pages xiii–xiv.

¹¹ George L. Hersey, *Architecture, Poetry and Number in the Royal Palace at Caserta*, MIT Press, 1983.

¹² Alvin Kernan, *Printing Technology, Letters and Samuel Johnson*, Princeton University Press, 1987.

¹³ Richard Cobb, *Paris and Its Provinces, 1792–1802*, Oxford University Press, 1975, pages 40–41.

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REPLY TO DENIS WOOD'S COMMENTARY

In replying to Denis Wood's commentary on *Art and Cartography: Six Historical Essays*, I find myself in the uncomfortable position of agreeing with the substance –

if not the manner – of many of his criticisms. I heartily agree with his general points that the history of cartography still needs more theory, more analysis, and more history (although I would add that I think it also needs more cartography). I also agree that there is a discontinuity between the expectations of my introduction to *Art and Cartography* and the range of topics for which I was able to find scholars. I would also have planned the conference in quite a different way now than ten years ago. In looking at the general writing on the subject at the time, however, it seemed to offer at least some improvement over its antiquarian forebears. Despite my general agreement with Denis Wood's views of the book and aspirations for the field at an idealistic level, however, I feel I must correct some serious overstatements and misstatements for the published record.

The intent of the book was not as grandiose as the commentator makes it appear. It was intended to be a useful summary of six (originally seven) people's opinions. The conference and exhibition entitled 'Art and Cartography' was intended as a modest *rapprochement* of art historians and map historians, a dialogue that has continued since then in such stimulating conferences as the 1984 Williamstown symposium on art and science in the Renaissance.¹ As the introduction makes clear, "The collection makes no claim to completeness or consistency, but it provides a taste of the many possible approaches to the study of the historical links between cartography and art." In reply to Wood's criticism that the title *Art and Cartography: Six Historical Essays* is 'pretentious,' I make two points. First, it is common practice in two-part titles to make the first part general in nature (as in 'Now and Then' – the commentator's best-known substantive contribution to the history of cartography).² Second, the word 'Essays' – commonly used in the humanities and social sciences to introduce a topic in a non-definitive way – was chosen specifically to connote the tentative nature of the book.

There is nothing about what the commentator calls 'collectable' maps that makes them *per se* unworthy of study. In art history and cartographic history they, after all, represent the classic ground of the debate. Of course there is much more. Of course the staggering quantities of estate plans are 'artful.' Of course the brief should extend to other cultures. One simply has to start somewhere. In the infancy of most subjects, as Wood recognizes, the interest of the connoisseurs has been the driving force. Art history is the obvious example. Ironically, however – since we normally regard antiquarians as interested in *things* – they were less interested in the physical, artifactual qualities of maps than we might expect. Consequently, much important physical evidence has been ignored. Rather than throw collectibles on the scrap-heap, therefore, perhaps we should continue to recognize that the printed maps of Early Modern Europe – like other cultural artifacts – still hold enormous intrinsic interest both as deposits of social relationships and as "lenses bearing on the circumstances of their making" (to use Michael Baxandall's phrases).³ They require reinterpretation by successive generations of scholars. From my viewpoint, this requires sensitivity to the subtleties of the physical artifact. Are the 'tediously similar' maps that Wood sees in this volume then merely a reflection of his own tastes, interests, and sensitivities? Even Greek vases can appear similar to some.

This jaded, 'seen-it-all-before' syndrome has thus perhaps blinded the com-

mentator to the theoretical achievements in the essays. If Svetlana Alper's essay – which was commissioned for this book before it was published elsewhere – is not strongly theoretical, we must have very different understandings of the word. Surely her idea that northern landscapes were essentially 'mapped' fulfills the heuristic role we expect of theory? To call Samuel Edgerton's chapter a recension of his *Renaissance Rediscovery of Linear Perspective* is to draw but a crude caricature of both. Each work expounds a different theme. The first examines the thesis that Renaissance perspective was closely tied to the introduction of Ptolemy's *Geography*, the second focuses on the preoccupation with gridded space. To parody his chapter as being "all but completely devoted to selected maps of the European Renaissance" is to ignore one of his major themes: that the Eastern and Western grids in cartography represented two opposite concepts, the Eastern intended to enhance a central focus and the Western intended to be an outward-looking tool of expansion. Not all may agree with this theory, but theory it is.

But theory is not everything in the early stages of research. Empirical work and the formulation of theory are always interactive processes. We will need many more hours in the archives, many more scholars and graduate students working on substantive topics before suitable theories can be developed and tested. The danger is that we not merely borrow fashionable theories from other fields for the sake of appearing *avant garde*. There is value in careful documentation and reinterpretation of maps from a familiar culture rather than engaging in vacuous, pancultural musings disguised as theory. Thus, while James Welu's essay may not attempt to "unfold the significance of any of the individual embellishments," his detective work in tracing the sources of the cartouches is an essential starting point for theoretical speculation.

Still believing as I do that our general views of the role of art and design in cartography mesh to a large extent, I was disappointed that several themes that I tried to address in the introduction and my own chapter on map lettering were misinterpreted. The discussion of the art/science dichotomy (the subject of many fruitful dialogues in the history of science, as in the special *Daedalus* issue devoted to the matter)⁴ was intended as a didactic device. While believing that these and other approaches to knowledge can be distinguished and described for this purpose, one of the main points of the introduction is that the two should be inseparably linked. Art is – or should be – an integral part of everyday life and technology. This non-exclusive view of art seems to clash with the commentator's, who believes that "elaborate cartouches are not a litmus for art of any kind." Is this not, to use his phrase, "a brandishing of unarticulated values?" My argument that the ornate, late sixteenth-century cancellaresca by Natale Bonifacio represented a 'deterioration' from Mercator's Latin letters is not a personal preference. It is based on a careful study of the general development of map lettering, by noting what has persisted and what has fallen by the wayside. While a strong case can be made that hagiography in any kind of history is a dangerous practice,⁵ it would be hard to find a typographer or calligrapher who would not agree that certain letterforms have persisted because their aesthetic form has so perfectly fitted their function. Mercator's chancery would be high on the list.

In short, I share Denis Wood's views that there is enormous potential in

expanding the historical relationship of cartography to “whole networks of human tasks and orientations.” Such a large agenda will require a combination of steady analytical research and careful synthesis directed by theoretical constructs. Measured, constructive criticism will also be an essential ingredient. But the extent to which the scarce resources and human energy of the field can be dissipated in incessant polemic is a case for debate.

¹ Williams College, Williamstown, MA, 18–20 October 1984.

² Denis Wood, ‘Now and Then: Comparisons of Ordinary Americans’ Symbol Conventions with those of Past Cartographers,’ *Prologue: The Journal of the National Archives* 9, 1977: 151–61.

³ Michael Baxandall, *Painting and Experience in Fifteenth Century Italy: A Primer in the Social History of Pictorial Style*. London: Oxford University Press, 1972; and *Limewood Sculptors of Renaissance Germany*. New Haven: Yale University Press, 1980.

⁴ Daedalus: *Journal of the American Academy of Arts and Sciences*. Summer 1986.

⁵ This caveat is developed in my ‘Cartography and Design History: A Commentary,’ *Design Issues* 2, 2, 1985:70.

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COMMENT ON A RECENT PAPER

In a recent paper by Brooks and Roberts (1986), two of the three projections are incorrectly identified. ‘Lambert’s projection of 1772,’ one of the seven he presented then (Lambert 1772), is a conformal projection of the world within a circle and is commonly called the Lagrange projection (Deetz and Adams 1944); Lagrange’s role was to generalize the concept in 1779. The parallels should be placed much closer to the Equator than they are on Brooks and Roberts’ nonconformal Figures 3 and 5, and all the Tissot indicatrices should therefore be circles instead of ellipses except at the two poles, which are singular points of nonconformality. The formulas for this projection can be expressed as follows:

$$x = 4R \cos \phi' \sin (\lambda/2) / [1 + \cos \phi' \cos (\lambda/2)]$$

$$y = 4R \sin \phi' / [1 + \cos \phi' \cos (\lambda/2)]$$

where $\sin \phi' = \tan (\phi/2)$ and (x, y) are rectangular coordinates, (ϕ, λ) are latitude and longitude (positive east of the central meridian), respectively, and R is the radius of the sphere for true scale at the center of the world map.

The ‘Brooks-Roberts modified van der Grinten,’ Figures 4 and 7 of their paper, was actually introduced by van der Grinten (1904) with his others, and has been called his third projection by Maurer (1935) and The Royal Society (1966). Brooks and Roberts’ earlier (1976) paper introduced this as a new projection, but the originality was questioned in Snyder (1979).

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RECENT CARTOGRAPHIC LITERATURE

Edited by BARBARA J GUTSELL

ATLASES

- Atlas cartography in transition. F. Mayer. *Kartographische Nachrichten*, vol. 37, no. 2, pp. 49–55 (In German).
- Development of the electronic atlas of Canada. Eva M. Siekierska and Stefan Palko. *The Chartered Cartographer*, vol. 7, no. 1, pp. 20–23.
- Draw up a total plan of working and contents of thematic map about the National Atlas of Panama 1985. Ryōichi Hashimoto. *Map*, vol. 24, no. 3, pp. 13–19. (In Japanese with Spanish summary).
- Labeling projections on published maps. John P. Snyder. *The American Cartographer* vol. 14, no. 1, pp. 21–28.
- The north of the maps included in the early world atlases. Shosuke Hosoi. *Map*, vol. 24, no. 3, pp. 8–14. (In Japanese with English summary).

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