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MAPS IN LITERATURE

PHILLIP C. MUEHRCKE AND JULIANA O. MUEHRCKE

THE essence of maps,¹ which is probably best characterized as controlled abstraction, is a source of fascination for popular writers. These writers, who possess no formal cartographic education, offer many examples of the ways in which the abstract nature of maps stimulates fantasy and imagination, leads to frustration, fosters speculation, aids (and sometimes hinders) decision making, or facilitates understanding, depending on why each map was compiled, the purpose for which it is being used, and the experience and skill of the map reader. That a map — or, for that matter, even a group of maps — cannot duplicate the infinite variety and complexity of reality has been a fruitful subject for literary imagery. Yet, as many writers point out, the very fact that a map does not reproduce reality is its great allure. Such observations by authors offer the map maker valuable insights into the point of view of the map user, who is dissociated from the actual mapping process. Writers, as a special group of map users with an imaginative and philosophical perspective on the subject of maps, have much to say to the cartographer.

Imaginary maps have provided the basis for whole novels, even for series of novels. Twelve books and more than thirty stories take place in a county invented and mapped by William Faulkner. Yoknapatawpha County — “William Faulkner, sole owner and

¹ The term “map” has numerous connotations, ranging from the formal logic of mathematical mapping to a much less rigorous planning or structural interpretation, as in the formulation of a strategy. In this paper the word “map,” unless otherwise noted, refers only to the common geographical map that is so ubiquitous in the environmental sciences. The essence of the discussion can be readily generalized to additional mappings, however.

► DR. PHILLIP MUEHRCKE is an associate professor of geography at the University of Wisconsin, Madison. JULIANA MUEHRCKE is a freelance writer who lives in Madison.

proprietor," as he wrote on one of the maps he drew — is a 2,400-square-mile county in northern Mississippi, with a population of 15,611. Faulkner describes it in such detail that we know nearly as much about it, about its geographical relationships, its population centers and service establishments, and its inhabitants, as we do about any real county. Ross Lockridge, Jr.'s mythical Raintree County is similar to Yoknapatawpha County in that it is located in an actual place — Indiana — and is so complete and alive that it could very well exist. Lockridge invented his county so that he could make it contain what he considered to be the essence of Indiana, just as Faulkner created his county to contain the essence of Mississippi and of the South. Thomas Hardy uses a map of Dorsetshire, England, in many of his books, although he calls it South Wessex and changes the names of its cities and other landmarks.

Books are also built around maps of places that exist only in the imagination. A map of an imaginary island was the inspiration and foundation for Robert Louis Stevenson's "Treasure Island."² Maps of the fantasy world called "Middle-earth" form the basis for J. R. R. Tolkien's "The Hobbit" and the "Lord of the Rings" trilogy.³ The many adventures in which Jim of "Treasure Island" and Bilbo of "The Hobbit" become involved are set in motion by a map.

THE NATURE OF MAPS

Writers may be especially attracted to maps because they are so well acquainted with the limitations of written communication in dealing with forms, processes, and relationships in the space-time continuum. Written language is linear. It has a beginning and an end and between the two flows predictably, according to the rules of grammar. The subject of discourse is rarely as well ordered; rather, it is characterized by the simultaneous interaction of many factors. Maps, on the other hand, involve far less transcription from reality and less formatting than idioms do, primarily because the position of maps on the gradient between reality and abstrac-

² Robert Louis Stevenson: *Treasure Island* (Rand McNally & Company, New York, 1915).

³ J. R. R. Tolkien: *The Hobbit* (rev. edit.; Ballantine Books, Inc., New York, 1966); *idem*, *The Fellowship of the Ring* (Ballantine Books, Inc., New York, 1965); *idem*, *The Two Towers* (Ballantine Books, Inc., New York, 1965); and *idem*, *The Return of the King* (Ballantine Books, Inc., New York, 1965).

tion is closer to reality. Maps appeal in a natural and logical way to our visual sense and to our need for conceptualization.

Because of this appeal the term "map" is used frequently, not only in literature but in real life, to convey the idea of clarification, as in "Map out your plan of attack," or "Do I have to draw you a map?" When Wordsworth, in his autobiographical poem "The Prelude," says, "Behold a map / Of my Collegiate life,"⁴ he is using "map" to mean a clear picture, stripped to its essentials.

Maps cannot be both revealing and complete. Thus the mapping process is one of evaluation, selection, and emphasis, which leads to simplification of the detail and intricacy of the real world. If it were complete, it would be too true to be useful, as Lewis Carroll observes in "Sylvie and Bruno Concluded":

"What do you consider the *largest* map that would be really useful?"

"About six inches to the mile."

"Only *six inches!*" exclaimed Mein Herr. "We very soon got to six *yards* to the mile. Then we tried a *hundred* yards to the mile. And then came the grandest idea of all! We actually made a map of the country on the scale of *a mile to the mile!*"

"Have you used it much?" I enquired.

"It has never been spread out, yet," said Mein Herr: "the farmers objected: they said it would cover the whole country and shut out the sunlight! So we now use the country itself, as its own map, and I assure you it does nearly as well."⁵

Since the exact duplication of a geographical setting is impossible, a map is actually a metaphor. The map maker asks the map reader to believe that a mosaic of points, lines, and areas on a flat sheet of paper is equivalent to a multidimensional world in space and time. To "read" a map, one needs imagination. Map symbols and their interrelationships are, in themselves, meaningless, except possibly for their esthetic appeal. For full meaning, the map reader must go beyond the physical presence of ink on paper to the real-world referents of the symbols. Josephine Tey recognizes this in "The Man in the Queue": "Until late at night he pored over the map, until the country grew as familiar to him as if he had known it. He knew from bitter experience that the very best map-reader had to suffer some severe shocks when he comes face to face with reality."⁶

⁴ William Wordsworth: *The Prelude, or Growth of a Poet's Mind* (Edward Moxon, London, 1850), pp. 142-143.

⁵ Lewis Carroll [Charles Dodgson]: *Sylvie and Bruno Concluded* (Macmillan, London, 1893), p. 169.

⁶ Josephine Tey [Elizabeth Mackintosh]: *The Man in the Queue* (Peter Davies, London, 1927), p. 138.

BEYOND ABSTRACT SYMBOLS

A map is both more and less than itself, depending on who reads it, in the sense that one can use the symbols to look beyond the map, or one can interpret the symbols in a rigid, limited way and not extract their full potential. In "Cable Car" June Drummond writes, "Finally, there was the fact that this was a frontier region. That meant far more than a line on a map. It meant the point where two rival philosophies met. It meant all the treachery, the corruption, the bravado, and the watchfulness of such a confrontation."⁷ To a person who uses his imagination, a map is greater than itself, for it evokes images and emotions not apparent on the piece of paper that is called a map. But a person who does not know how to read a map or who lacks the imagination necessary to leap from the printed map to the reality it depicts will be less aware of its value. Of course, the distinction between imaginative and unimaginative map reading is not absolute. For example, a person may view the relationships between the phenomena symbolized on a map with great imagination, while ignoring what has not been symbolized, and vice versa.

Unimaginative map reading may hold certain advantages for the user, particularly when decision making involves emotion-laden issues. Sometimes an objective, removed position is desirable in order to avoid the danger that short-term personal feelings will compromise long-range strategy decisions whose eventual impact goes far beyond the individual directly involved. Thus, military commanders are able to point out a spot on a map and say, "Bomb here"; they do not or cannot allow themselves to visualize the homes and people represented by the dot they point out.

Norman Mailer describes this unimaginative map reader in "The Naked and the Dead." Major Dalleson, making strategy decisions with maps at headquarters during the war, "had a picture for a moment of the troops moving sullenly along a jungle trail swearing at the heat, but he could not connect that to the figures on the map. An insect crawled sluggishly over his desk and he flicked it off."⁸ As casually as this, as casually as he flicks an insect from his desk, a decision is made and the fate of men determined.

Major General Cummings, another character in "The Naked

⁷ June Drummond: *Cable Car* (Holt, Rinehart & Winston, Inc., New York, 1967), p. 73.

⁸ Norman Mailer: *The Naked and the Dead* (Holt, Rinehart & Winston, Inc. New York, 1948), p. 567.

and the Dead," wants reality to be reduced to mere "figures on the map." He feels frustrated by the fact that the emotions of the men in the field keep his well-reasoned plans from being as effective in reality as they are in theory. Thus at one point Cummings threw down his pencil "and stared with a febrile loathing at the map board by his cot. By now, it was a taunt to him."⁹ He may be able to control the world absolutely on a map, but he refuses to face the fact that a map is more than symbols on paper and that he is ignoring the reality that the map portrays.

In "Night Flight," Antoine de Saint-Exupéry brilliantly contrasts the unemotional world of "figures on a map" with the real, emotion-filled world that those figures represent. In this case, the character Rivière does not lack imagination, but he lets nothing stop him from his job of getting the planes in and out on time. Although he is stationed in the reality of his maps, able to see and to feel the suffering that they represent, he tries to ignore his emotions in order to get his job done.

When Robineau entered the office, Rivière had forgotten all about him. He was musing before a wall-map on which the company's air-lines were traced in red. The inspector awaited his chief's orders. Long minutes passed before Rivière addressed him, without turning his head.

"What is your idea of this map, Robineau?"

He had a way of springing conundrums of this sort when he came out of a brown study.

"The map, Monsieur Rivière? Well —"

As a matter of fact he had no ideas on the subject; nevertheless frowning at the map, he roved all Europe and America with an inspectorial eye. Meanwhile Rivière, in silence, pursued his train of thought. "On the face of it, a pretty scheme enough — but it's ruthless. When one thinks of all the lives, young fellows' lives, it has cost us! It's a fine, solid thing and we must bow to its authority, of course; but what a host of problems it presents!" With Rivière, however, nothing mattered save the end in view.¹⁰

For a moment Rivière has allowed his imagination to make the leap from the cold, solid "face" of the map to the reality it symbolizes. His imagination runs so free that he even applies the term "ruthless" to the map — a quality no unimaginative map reader would think of attributing to a map. But in order to accomplish "the end in view" he veers abruptly from this reality and returns to thinking of the map merely as an abstract thing.

⁹ *Ibid.*, p. 277.

¹⁰ Antoine de Saint-Exupéry: *Night Flight* (The New American Library, Inc., New York, 1961), p. 48.

In contrast to Rivière's work on land, tracing the route of his pilot, Fabien, on a map, Saint-Exupéry shows the reality of Fabien flying blindly through storms in the dark. Before he dies, Fabien is thinking:

Let them shout any orders whatever to him and Fabien would obey. If they tell me to go round and round, he thought, I'll turn in circles and if they say I must head due south . . . For somewhere, even now, there still were lands of calm, at peace beneath the wide moon-shadows. His comrades down there, omniscient folk like clever scientists, knew all about them, poring upon the maps beneath their hanging lamps, pretty as flower bells. But he, what could he know save squalls and night, this night that buffeted him with its swirling spate of darkness?¹¹

This, then, is the reality — death among the stars — that Rivière sees in his map. And yet he refused to dwell on what lay beyond the face of the map; if he had, he would not have been able to keep sending pilots up to face such danger. He would be better off, perhaps, would suffer less, if he were a more unimaginative map reader and could, like Major Dalleson, see only "figures on the map."

In "Deliverance," James Dickey demonstrates the capacity of a map to evoke more than the composite of graphic symbols. In the opening paragraphs of the novel, four friends are studying a map as they plan a canoe trip down a river that will shortly be obliterated under the backwater from a new dam. For Ed, the narrator, the map has power and vitality — almost a life of its own.

It unrolled slowly, forced to show its colors, curling and snapping back whenever one of us turned loose. The whole land was very tense until we put our four steins on its corners and laid the river out to run for us through the mountains 150 miles north. Lewis' hand took a pencil and marked out a small strong X in a place where some of the green bled away and the paper changed with high ground, and began to work downstream, northeast to southwest through the printed woods. I watched the hand rather than the location, for it seemed to have power over the terrain, and when it stopped for Lewis' voice to explain something, it was as though all streams everywhere quit running, hanging silently where they were to let the point be made. The pencil turned over and pretended to sketch in with the eraser an area that must have been around fifty miles long, through which the river hooked and cramped.

"When they take another survey and rework this map," Lewis said, "all this in here will be blue. . . ."

I leaned forward and concentrated down into the invisible shape he had drawn, trying to see the changes that would come, the nighttime rising of dammed water bringing a new lake up with its choice lots, its marinas and beer cans, and

¹¹ *Ibid.*, p. 98.

also trying to visualize the land as Lewis said it was at that moment, unvisited and free. . . . I looked around the bar and then back into the map, picking up the river where he would enter it. . . . I settled back and came out of the map.¹²

The author's wording gives life to the map; one can almost see the river running. By frequently employing such phrases as looked "down into" the map and "came out of the map," Dickey reinforces the idea that to an imaginative map reader a map is not just something you look at (as it was for Major Dalleson). As he sits in the bar, Ed is not simply staring at the map; he is reading the map. The distinction is analogous to the difference between reading a book for its obvious story line and interpreting the symbolism of a book to discover what the author is trying to show. Thus for Ed the piece of paper on which the map is printed holds a sense of an unknown dimension, wonder, and excitement; he can see a crooked blue line on paper and at the same time a raging river. As he continues to study the map, he sees even more.

It [the map] was certainly not much from the standpoint of design. The high ground, in tan and an even paler tone of brown, meandered in and out of various shades and shapes of green, and there was nothing to call you or stop you on one place or the other. Yet the eye could not leave the whole; there was a harmony of some kind. Maybe, I thought, it's because this tries to show what exists. And also because it represents something that is going to change, for good. There, near my left hand, a new color, a blue, would seep upward into the paper, and I tried to move my mind there and nowhere else and imagine a single detail that, if I didn't see it that weekend, I never would; tried to make out a deer's eye in the leaves, tried to pick up a single stone.¹³

A map is a paradox in that physically it is mere marks on sheets of paper, yet visually it brings to mind a multidimensional world, containing objects and even emotions not perceived directly on the piece of paper. Even more paradoxically, a map can stimulate its reader to think in terms of a whole range of scales, even though the map itself is limited to one scale. Thus the same map can evoke things as large as a mountain and a river and things as small as "a deer's eye" and "a single stone."

In direct contrast to map readers who do not allow themselves to see the reality that has been abstracted onto a map are those who actually substitute the map for reality. In early times, before travel was as widespread as it is today, writers often noted that people who had never traveled were able to have exciting jour-

¹² James Dickey: *Deliverance* (Houghton Mifflin Co., New York, 1970), pp. 13-15.

¹³ *Ibid.*, p. 21.

neys by map. In "Don Quixote," for example, Cervantes commented that one can "journey over all the universe in a map, without the expense and fatigue of travelling, without suffering the inconveniences of heat, cold, hunger, and thirst."¹⁴ Robert Herrick also observes the way in which the imagination may impart life to a map.

But thou at home without or tyde or gale,
Canst in thy Map securely saile:
Seeing those painted Countries; and so guesse
By those fine Shades, their Substances:
And from thy Compasse taking small advice,
Buy'st Travell at the lowest price.¹⁵

More often, a map stimulates travel and adventure. A person with imagination can be inspired by a map to do more than look at it, to enter into the reality it depicts. In "Heart of Darkness" Joseph Conrad notes the force of a map, pulling the map reader into action.

Now when I was a little chap I had a passion for maps. I would look for hours at South America, or Africa, or Australia, and lose myself in all the glories of exploration. At that time there were many blank spaces on the earth, and when I saw one that looked particularly inviting on a map (but they all look that) I would put my finger on it and say, 'When I grow up I will go there.'¹⁶

Maps also move the characters in the Tolkien trilogy to seek adventure: "Frodo began to feel restless, and the old paths seemed too well-trodden. He looked at maps, and wondered what lay beyond their edges: maps made in the Shire showed mostly white spaces beyond its borders."¹⁷

This passage from "The Fellowship of the Ring" emphasizes both the imaginative appeal and the symbolic character of a map. One accepts the fact that a map is a symbol for reality, and only the most naive map reader would assume that the world ends at the edges of a map. For Frodo, the most fascinating part of a map is what lies outside its boundaries, just as Marlow, Joseph Conrad's narrator in "Heart of Darkness," is most intrigued by

¹⁴ Miguel de Cervantes Saavedra: *Don Quixote of La Mancha* (4 vols.; John Grant, Edinburgh, 1902), Vol. 3, p. 80.

¹⁵ Robert Herrick: *A Country Life: To His Brother, M. Tho. Herrick*, in *The Complete Poetry of Robert Herrick* (New York Univ. Press, New York, 1963), p. 52.

¹⁶ Joseph Conrad: *Heart of Darkness and The Secret Sharer* (The New American Library, Inc., New York, 1950), pp. 70-71.

¹⁷ J. R. R. Tolkien: *The Fellowship of the Ring* (Ballantine Books, Inc., New York, 1965), p. 71.

the empty parts of his maps. The fact that even blank spaces on a map can generate excitement and desire for travel underscores the imagination's power to give maps a depth beyond what is seen on paper.

Robert Heinlein deals with this ability of a map to be more than itself in "Stranger in a Strange Land." In the following passage, Mike, the Martian, has recently come to Earth from Mars.

He picked out, with the help of the girls, where they were on the map flowing across the lap board. He had not known until recently that humans knew about maps. It had given him a twinge of happy homesickness the first time he had grokked a human map. It was static and dead compared with maps used by his people — but it was a map. Even human maps were Martian in essence — he liked them.¹⁸

The significance of this passage lies in the understanding of the complex Martian philosophy, as Heinlein describes it. The basis of the Martian philosophy is that everything is interrelated. Each person is all that he has ever been or seen or felt or experienced. No person or thing is separate from any other person or thing, once he has "grokked it," or known it completely. When Mike says that a map is "Martian in essence," he means that it has an interconnectedness with things beyond itself. And each map reader will bring to a map all that he has ever experienced; how much he will get out of a map will depend upon how many facets of himself he brings to it.

SENSE OF TRUTH

But no matter how much outside itself a map may represent, no matter how much excitement and adventure our imaginations may impart to it, a map essentially tries to show things as they really are. As Saul Bellow says in "Mr. Sammler's Planet,"

The superfluous irritates me sharply. . . . However, it is sometimes necessary to repeat what all know. All mapmakers should place the Mississippi in the same location, and avoid originality. It may be boring, but one has to know where he is. We cannot have the Mississippi flowing toward the Rockies for a change.¹⁹

As accurate a portrayal of reality as possible, rather than inventiveness, is the first aim of a map, as Frances Gray Patton points out in "Good Morning, Miss Dove." Miss Dove, a geography

¹⁸ Robert A. Heinlein: *Stranger in a Strange Land* (Medallion Books, Berkeley, Calif., 1968), p. 181.

¹⁹ Saul Bellow: *Mr. Sammler's Planet* (Fawcett Publications, Greenwich, Conn., 1971), pp. 207-208.

teacher, "had seen paintings done in the art class — great, free, brilliant blobs of color running into the margins, and had shuddered to imagine maps executed with such techniques!"²⁰ A map maker must strive for accuracy, not originality. Thus a map, even more than the printed word, impresses people as being authoritative and tends to be accepted without qualification. This aspect of mapping is beautifully illustrated by an episode in Joseph Heller's "Catch-22" in which a bomb squadron is briefly reprieved from a mission to bomb Bologna because it is raining there. The men realize that as soon as it stops raining, they will have to go. They cannot escape this knowledge, for the truth is clearly visible on the map, at which they all keep staring.

The evidence was there vividly in the narrow red ribbon tacked across the mainland: the ground forces in Italy were pinned down forty-two insurmountable miles south of the target and could not possibly capture the city in time. . . . For hours they stared relentlessly at the scarlet ribbon on the map and hated it because it would not move up high enough to encompass the city.²¹

Because of their utter faith in the veracity of the map, the men blame the map for showing a truth they cannot bear to face and actually believe that if the bomb line were only moved up on the map, reality would be altered. Thus they stare pleadingly at the map "as though hoping to move the ribbon up by the collective weight of their sullen prayers."²²

"I really can't believe it," Clevinger exclaimed to Yossarian in a voice rising and falling in protest and wonder. "It's a complete reversion to primitive superstition. They're confusing cause and effect. It makes as much sense as knocking on wood or crossing your fingers. They really believe that we wouldn't have to fly that mission tomorrow if someone would only tiptoe up to the map in the middle of the night and move the bomb line over Bologna. Can you imagine? You and I must be the only rational ones left."

In the middle of the night Yossarian knocked on wood, crossed his fingers, and tiptoed out of his tent to move the bomb line up over Bologna.

Corporal Kolodny tiptoed stealthily into Captain Black's tent early the next morning, reached inside the mosquito net and gently shook the moist shoulder blade he found there until Captain Black opened his eyes.

"What are you waking me up for?" whimpered Captain Black.

"They captured Bologna, sir," said Corporal Kolodny. "I thought you'd want to know. Is the mission cancelled?"

²⁰ Frances Gray Patton: *Good Morning, Miss Dove* (Pocket Books, New York, 1956), p. 32.

²¹ Joseph Heller: *Catch-22* (Simon and Schuster, Inc., New York, 1961), pp. 117-118.

²² *Ibid.*, p. 118.

Captain Black . . . peered without emotion at the map. Sure enough, they had captured Bologna.²³

Heller carries to its absurd limit the human tendency to trust completely in a map's authority. In this case, changing a line on a map really does change the reality. It does not enter the mind of anyone to question the actuality that the map depicts; if the map says it, it must be true. The mission to Bologna is canceled, and everyone is happy.

The force of truth in maps is the quality that affords them much of their appeal to writers. Howard McCord in his poem "Listening to Maps" is impressed with the essential truthfulness of maps.

There is no way to satirize a map.
It keeps telling you where you are.
And if you're not there,
you're lost. Everything is reduced
to meaning.

A map may lie, but it never jokes.²⁴

McCord further suggests that the power of maps to show truth is so great that through a study of maps he may even find his true self.

We are sitting here, you and I,
in a place on a map.
We know this.
Yet we are not on the map.

We are looking for ourselves.
This is the rustle of leaves
that you hear,
the crackle of folding paper,
the sound of old maps.²⁵

The fact that a map is both truthful and orderly, showing meanings at a glance, gives one the hope that the pattern of life itself might one day be so simply revealed. McCord's frustration is evident; so far maps have not told him what he wants to know. Yet he keeps hoping, looking at maps, and thinking that if only he could see through the chaos of his own life in the same way as the car-

²³ *Ibid.*

²⁴ Howard McCord: Listening to Maps, in *his* Maps: Poems Toward an Iconography of the West (Kayak Books, Inc., Santa Cruz, Calif., 1971), p. 10.

²⁵ *Ibid.*

tographer orders his complex mixture of data, meanings would become more readily apparent.

Similarly, Johnny Shawnessy, the hero of "Raintree County," spends his whole life searching for the mythical "raintree" that symbolizes the secret of life. He is certain that the meaning he seeks can be found in the map of Raintree County. The book opens and ends with long passages about the "Atlas" of Raintree County. The atlas is central to the entire novel, for it holds the essence of Raintree County, which is the essence of life. The atlas is referred to as Johnny's "unique copy of the universe";²⁶ in other words, it represents his view of life.

Johnny feels that it is up to him to find the truth in the map. "The formal map of Raintree County had been laid down like a mask on something formless, warm, recumbent, convolved with rivers, undulous with flowering hills, blurred with motion, green with life."²⁷ Like a sheet draped over furniture in a vacant house, the map has the basic form of that which underlies it, but one must interpret that form to discover the reality. Johnny must look beyond "the formal map" to the meanings it symbolizes. Once, in a dream, the map almost reveals the secret of life to Johnny:

He was certain that in the pattern of its lines and letters this map contained the answer to the old conundrum of his life in Raintree County. It was all warm and glowing with the secret he had sought for half a century. The words inscribed on the deep paper were dawnwords, each one disclosing the origin and essence of the thing named. But as he sought to read them, they dissolved into the substance of the map.²⁸

He comes close to the meaning of life another time, when he sees "the fabric of his life spread out like a map of interwoven lines."²⁹

A map engages a writer's creative thought because it is truth compressed in a metaphorical way, holding meanings it does not express on the surface. In this sense, a map may be equated with a poem, as it is in the final paragraphs of "Raintree County." As Johnny walks home, holding the atlas under his arm, he sees himself at last holding the golden bough from the "raintree." The branch suddenly comes alive and turns into "a map covered with lines and letters, a poem of mute but lovely meanings."³⁰ Johnny thus finds his unique place in the pattern of the universe. It has

²⁶ Ross Lockridge, Jr.: *Raintree County* (Dell Publishing Co., New York, 1957), p. 507.

²⁷ *Ibid.*, p. 15.

²⁸ *Ibid.*, pp. 13-14.

²⁹ *Ibid.*, p. 281.

³⁰ *Ibid.*, p. 512.

taken him all his life to decipher it, but the truth was always in his map of Raintree County.

No map, of course, can be completely "true." It must always sacrifice truth in one dimension to show truth in another. Yet writers still find an irresistible force of truth in maps. Perhaps this is because maps possess a spatial fidelity that no words can capture. As McCord says about maps, "Everything reveals. It is not necessary to read."³¹ Dickey believes that a map has power because it "tries to show what exists."³² James Herndon expresses this concept in "How to Survive in Your Native Land" by saying that a map has "the decisive quality of the real."³³

The fascination of a map, then, derives from its paradoxical ability to be both more and less than itself and at the same time to attempt truthfulness. Irving Stone brings out this double nature of maps in "Immortal Wife: The Biographical Novel of Jessie Benton Fremont." Jessie Benton and John Fremont, the famous map maker, are drawn together by their love of maps. Whenever they are working on or looking at a map, the reader is struck by the electric excitement and sense of adventure that they find in the map. Soon after they are married, John leaves on a six-month expedition. To help her to live through the loneliness of these months, Jessie comes up with an idea, which she explains to her father.

"When John showed me his provisional maps, trying to give me an idea of how many miles his party would cover each day, I thought I might set up a duplicate map, drawing to scale all the country between St. Louis and South Pass. We know what day he expects to leave St. Louis; I could start him off on that date, drawing a line for the extent of ground he might cover in that day, then put a red dot where they would camp for the night and build their fires. . . . I had thought I would read the available accounts of what the country is like for each day's march: what wild life is there, what kind of animals they will be shooting for their food. I would draw my map to show the plains and forests and rivers and mountains, and dotted through the map, I would paint in what I imagined the country looked like, with a small field of wild flowers, a patch of pine forests, a few buffaloes roaming across a plain. . . ."

"You've set quite a task for yourself," said her father, amused.

"But don't you see, Father," she cried passionately, "in that way he never leaves me, I'll never be alone, I'll be with him on the trail every hour."³⁴

³¹ McCord, *op. cit.* [see footnote 24 above], p. 9.

³² Dickey, *op. cit.* [see footnote 12 above], p. 21.

³³ James Herndon: *How to Survive in Your Native Land* (Simon and Schuster, Inc., New York, 1971), p. 183.

³⁴ Irving Stone: *Immortal Wife: The Biographical Novel of Jessie Benton Fremont* (Doubleday & Co., Inc., Garden City, N.Y., 1944), pp. 68-69.

Jessie makes her map, which does help her feel close to John. When he has returned and she is showing him her map, she points out to him a campfire she had drawn on the map and tells him, "That was the night I missed you most. Since I couldn't be there, I made you comfortable: I put you alongside of a cool river so that you could have a swim after the day's march; with plenty of game at hand. . . ." ³⁵ Her map, then, holds far more than itself. She can look at it and see her husband sitting by a campfire, even feel his weariness and hunger. And Jessie, like Ed in "Deliverance," is able to incorporate into her map details that are inconsistent in scale, since a campfire depicted at the same scale as other features would not even be visible. Personal importance has taken precedence over geographical accuracy.

On the other hand, Stone stresses that a map is basically a highly practical object, attempting before all else to show truth. John Fremont, working on a map of his route to Oregon, tells Senator Benton, "Yes, it is slow work, Senator, for we must achieve the utmost precision. The tiniest error on this map may mean danger to caravans expecting water or provision at a designated spot. . . . we cannot expose unprotected immigrant trains to hostile Indians and deserts and snow-covered mountain ranges until we can assure them that these maps are accurate." ³⁶

Later Jessie Fremont meets a young wife who is about to set out for Oregon in a caravan with her husband, her baby, and all their possessions. She tells Jessie, "But it ain't dangerous no more. Look, I'll show you the map we got, it was drawn by that military officer." Taking out "a much-thumbed paper," the woman continues, "You see here, it shows where there's plenty of grass for the horses and where we must stock up with water, and just how we get over the mountains at the pass." ³⁷

Thus, while a map may hold excitement and romance, and while for a romantic girl like Jessie it can assuage loneliness and bring her close to her husband, for others it is a practical and vital means to a new life. They must risk their lives on the truth and accuracy of that "much-thumbed paper."

THE FASCINATION OF MAPS

The dual character of a map, which may be a workable tool in the real world and at the same time much more than a tool, ac-

³⁵ *Ibid.*, p. 76.

³⁶ *Ibid.*, pp. 24-25.

³⁷ *Ibid.*, pp. 97-98.

counts for much of its magnetism. People are drawn to maps because each person sees what he wants to see in them. The same thing is true for map makers. A map is by nature interdisciplinary, and all imaginable fields of learning may be brought to both making it and reading it. The ability of a map to unify is exemplified by Irving Stone in "Immortal Wife," when Jessie Fremont has the idea of making a map of her husband's journey in order to feel she is with him. At first Jessie is merely indulged in her amusing idea, but it soon becomes clear that no one can resist adding whatever he can to her large (four feet by nine feet) map.

Her map began to cause interest in Washington. General Winfield Scott, who had gone out to Detroit to fight the Blackhawk Wars, insisted upon putting down everything he knew about the territory around the Great Lakes, while General Lewis Cass, the first governor of Michigan Territory, came in a few nights later to sketch in the country between Detroit and Chicago, a trail over which he had been the first white man to pass. Colonel Kearny, who had planned several of his military expeditions into the Southwest on the porch of Senator Benton's St. Louis home, did a water-color sketch of that terrain. A professor of botany from Harvard suggested some of the wild life. Colonel Abert, who fancied himself as an astronomer, came to dinner and could hardly finish his chocolate mousse in his impatience to draw in the heavenly bodies.³⁸

Later it is mentioned that "half of official Washington" is involved in making Jessie's map and that people continue to add whatever bits of information they have thought of. Some of the most important people in Washington clamor for a part in the map.

Clearly, a map invites interaction. The lack of completeness of a map inspires one to annotate it with his own experience. To a map lover, a map will not be complete until he has marked in some bright color the routes he has taken across it, the cities he has visited, or his favorite fishing spots or hiking trails. Tolkien's Bilbo, for example, "loved maps, and in his hall there hung a large one of the County Round with all his favorite walks marked on it in red ink."³⁹

In "How to Survive in Your Native Land" Herndon describes an experience similar to Jessie Fremont's. Richard, one of Herndon's students, is considered eccentric by almost everyone. His overriding interests are amphibians, drawing cartoons, and making maps. At first the other children shut him out completely, but gradually they begin to accept him, largely because of their interest in his maps. Each student contributes to a map Richard is

³⁸ *Ibid.*, p. 70.

³⁹ Tolkien, *The Hobbit* [see footnote 3 above], pp. 32-33.

making. Even Herndon “had plans for Richard’s map, and spent some time later elbow to elbow with kids (Move over! I can’t move over, I’m drawing right here! Well I got to have room too!) drawing in Herndon’s French Restaurant. . . .”⁴⁰ Maps have a force so compelling that a teacher fights for space alongside his students in order to add his touch to Richard’s map.

Everyone in Herndon’s class was delighted with Richard’s map — except Richard himself. In allowing students and teacher to draw whatever they wanted on his map, Richard “had to compromise his idea of reality — the map was now clearly a fantasy, could only be a fantasy, at best something of the future. It *might* come true; that was as close to the real as Richard could make it.”⁴¹ One of the most important qualities of a map, its attempt to reveal truth, has been violated. Because Richard, unlike the other students, loves and understands maps, he realizes, as Ed does in “Deliverance,” that the power of a map is largely derived from a sagelike force that “tries to show what exists.” Since geographical reality has been compromised to accommodate the mental space images and fantasies of many individuals, Richard’s map lacks that prophetic quality.

LIMITATIONS OF MAPS

The story of Richard’s map points out that, for map maker and map reader alike, it is as important to understand what a map cannot do as what it can do. The writers with the greatest appreciation of maps are those who realize the limitations of a map. Within its practical limits — that is, as long as one does not ask too much of it — a map functions well. For example, it is physically impossible to take a sphere like the earth (or, more precisely, an oblate ellipsoid) and “map” its surface on a flat sheet of paper without distorting distance, direction, shape, or area. John Donne observes this limitation in his poem “Hymn to God My God, In My Sickness”: “As West and East / In all flatt Maps (and I am one) are one, / So death doth touch the Resurrection.”⁴² A sphere has no beginning, no end, and is continuous in all directions. Maps of the earth’s surface have edges, discontinuities, and freely violate proximity relationships.

⁴⁰ Herndon, *op. cit.* [see footnote 33 above], p. 183.

⁴¹ *Ibid.*, p. 186.

⁴² John Donne: Hymn to God My God, In My Sickness, in *The Complete Poems of John Donne* (New York Univ. Press, New York, 1968), pp. 390–391.

Simple scale reduction is also one of the more obvious map restraints. A fifteen-foot length of butcher paper could barely accommodate Richard's few map-making friends, let alone provide space for true-scale mapping of the multitude of other features that were selected for depiction on the map. The poverty of map space leads inevitably to a scale reduction of map referents.

More than simple reduction is involved, however. A map is never simply a scaled-down version of reality with all features intact but in miniature. Maps are really "scientific caricatures" of the phenomena they represent. The detail and the complexity of reality is selected, simplified, and then emphasized, so as to portray only what the map maker believes to be the essence of the map referent space, as defined by the purpose of the map. In the process of generalizing, cartographers have tended to emphasize facets of objective earth geometry, which are relatively static, rather than the more dynamic and subjective functional aspects of earth-related features. Therefore, specific applications for general map utility are forfeited, as the following passage by Frances and Richard Lockridge clearly illustrates.

This seemed, from the map, the best way. Probably there were better ways. There are usually better ways than the map reader knows of. In almost any area there are better ways, known to those who traverse them daily — ways around traffic, ways that avoid lights; ways, for that matter, which avoid toll booths. But these are hidden to the man who has only a map to go by, whatever his need to hurry.⁴³

The conflict between the professed neutrality of a map and the actual functional needs of map users is further illustrated by the Lockridges when Peter, the main character in "The Devious Ones," is driving as fast as he can in an attempt to save the life of the girl he loves:

Up the Taconic, across toward Peekskill — apparently into Peekskill — on a route numbered 35. Up 9 a short distance, sharply to the left on the merest tracing of a road, a road the map makers had drawn with a needle's point. Then 11 F, which was, to the map makers, not much more of a road.⁴⁴

Obviously the road that meant so little to the map makers, in terms of its level of improvement or volume of traffic, means everything to Peter. The problem of having many more specifics

⁴³ Frances Lockridge and Richard Lockridge: *The Devious Ones* (J. B. Lippincott Co., New York, 1964), p. 157.

⁴⁴ *Ibid.*, p. 158.

than could be put on a map if space allowed and if the map maker thought them important is common. Every cartographer is well acquainted with this situation, which Richard, in "How to Survive in Your Native Land," also faces as he tries to control the making of his map. He is worried that his map will become too cluttered and messy, as indeed it does.

Since geographical maps deal predominantly with space, cartographers have found it convenient to hold time relatively constant through elaborate temporal averaging or time-slicing techniques. This point is not always clear, although it is commonly recognized that conventional maps are inherently static devices. For instance, C. P. Snow writes:

"I'm only just beginning to realize," said George, "what a wonderful invention a map is. Geography would be incomprehensible without maps. They've reduced a tremendous muddle of facts into something you can read at a glance. Now I suspect economics is fundamentally no more difficult than geography. Except that it's about things in motion. If only somebody could invent a dynamic map—"⁴⁵

Geographers may well argue the implications in Snow's observation that geographers study only static phenomena or situations; but the point remains that maps do give the illusion of stopping time. Thus their general application is severely limited when one considers that geographical events take place in a space-time continuum.

An additional restriction of maps is the frequent misinterpretation of symbols. An extreme example is the error of thinking that the symbol is the object it is meant to represent. To treat a map as visually equivalent to reality is analogous to thinking of the statue of a saint as the saint himself. The disparity between the "map world" and the "real world" can be crucial in a problem-solving context; to substitute a map for reality can have serious consequences. Mark Twain recognizes this map-reading error in "Tom Sawyer Abroad." When Huck and Tom take a trip in a balloon, Huck doubts that they have passed Illinois, although he thinks they should have. Tom asks Huck how he knows this.

"I know by the color. We're right over Illinois yet. And you can see for yourself that Indiana ain't in sight."

"I wonder what's the matter with you, Huck. You know by the *color*?"

"Yes, of course I do."

⁴⁵ C. P. Snow: *Strangers and Brothers* (Charles Scribner's Sons, New York, 1960), p. 58.

"What's the color got to do with it?"

"It's got everything to do with it. Illinois is green, Indiana is pink. You show me any pink down here, if you can. No, sir; it's green."

"Indiana *pink*? Why, what a lie!"

"It ain't no lie; I've seen it on the map, and it's pink."

You never see a person so aggravated and disgusted. He says:

"Well, if I was such a numskull as you, Huck Finn, I would jump over. Seen it on the map! Huck Finn, did you reckon the States was the same color out of doors as they are on the map?"

"Tom Sawyer, what's a map for? Ain't it to learn you facts?"

"Of course."

"Well, then, how's it going to do that if it tells lies? That's what I want to know."

"Shucks, you muggins! It don't tell lies."

"It don't, don't it?"

"No, it don't."

"All right, then; if it don't, there ain't no two States the same color. You git around *that*, if you can, Tom Sawyer."

He see I had him, and Jim see it too; and I tell you, I felt pretty good, for Tom Sawyer was always a hard person to git ahead of.⁴⁶

Colors on a map often serve no function except to separate areas, yet when one thinks of a map, the different colors are frequently what one remembers best. Unsophisticated map readers tend to think of geographical regions in terms of mental images created by prior map experiences, as is exemplified in John Updike's "Rabbit Redux": "American dream. When he first heard the phrase as a kid he pictured God lying sleeping, the quilt-colored map of the U.S. coming out of his head like a cloud."⁴⁷

The misinterpretation of colors on a map is further exemplified in Frances Gray Patton's "Good Morning, Miss Dove."

"Is that the same map?" Jincey asked. She pointed to the large map of the world that hung, rolled up for the summer, above the blackboard behind Miss Dove. "Is China still orange?"

"It is a new map," Miss Dove said. "China is purple."

"I liked the old map," Jincey said. "I liked the old world."

"Cartography is a fluid art," said Miss Dove.⁴⁸

It is interesting that what Jincey, Miss Dove's former student, remembers most from her geography course is the color of China. More significant, however, is her confusion of cause and effect. She would like to believe that if she could keep the map from

⁴⁶ Mark Twain [Samuel Clemens]: *Tom Sawyer Abroad* (Charles L. Webster & Co., New York, 1894), pp. 42-43.

⁴⁷ John Updike: *Rabbit Redux* (Fawcett Publications, Greenwich, Conn., 1972), p. 106.

⁴⁸ Patton, *op. cit.* [see footnote 20 above], p. 56.

changing, she would keep the world from changing — a prevalent map misinterpretation. How often have we heard people comparing the earth to a “living map” or speaking of “the changing map” when what they really mean is “the changing world?” They are looking at a map as an active subject, rather than a passive reflector of the mutable world.

Clearly, a map is an artificial device. The essence of life, that which is most crucial, usually cannot be included on a map. In “Travels with Charley,” John Steinbeck records which highways he took on his trip across Maine and adds, “I can report this because I have a map before me, but what I remember has no reference to the numbers and colored lines and squiggles.”⁴⁹ The vivid, meaningful experiences of life — touches, sounds, smells, linkages between people — cannot be captured on a map. Maps may even hinder a person from experiencing life, as Steinbeck points out.

For weeks I had studied maps, large-scale and small, but maps are not reality at all — they can be tyrants. I know people who are so immersed in road maps that they never see the countryside they pass through, and others who, having traced a route, are held to it as though held by flanged wheels to rails.⁵⁰

Steinbeck evidences a healthy suspicion of maps as complete records of reality that every map reader should have. He is well aware that a map represents only a few of the many realities that exist. Its purpose is to help us see more, but if we expect too much of it, it may prevent us from seeing anything.

There are map people whose joy is to lavish more attention on the sheets of colored paper than on the colored land rolling by. I have listened to accounts by such travelers in which every road number was remembered, every mileage recalled, and every little countryside discovered. Another kind of traveler requires to know in terms of maps exactly where he is pin-pointed every moment, as though there were some kind of safety in black and red lines, in dotted indications and squirming blue of lakes and the shadings that indicate mountains. It is not so with me. I was born lost and take no pleasure in being found, nor much identification from shapes which symbolize continents and states. Besides, roads change, increase, are widened or abandoned so often in our country that one must buy road maps like daily newspapers.⁵¹

Steinbeck, by realizing the map’s limitations, finds travel far more satisfying than his friends who are slaves to maps. For him, a map is useful as a spatial framework in which to associate his

⁴⁹ John Steinbeck: *Travels with Charley* (Bantam Books, New York, 1963), p. 71.

⁵⁰ *Ibid.*, p. 23.

⁵¹ *Ibid.*, p. 70.

memories of different parts of the country. Although he belittles maps, his trip across the United States would surely have been difficult without them, and he might never have experienced many of his colored autumns, pine forests, and new friends. He admits that his anticipation of his trip was heightened by the study of maps for weeks beforehand. And, certainly, every map of the United States he looked at after his trip held far more for him than it did before.

THE BALANCED PERSPECTIVE

An understanding of a map's liabilities leads to an appreciation of its assets, for those things that limit a map in one context are the very aspects that expand its scope in the next. Underlying many of the references to maps in literature is the recognition that the greatest weaknesses of a map are also its greatest strengths. For example, projecting the earth's surface onto a sheet of paper permits us to see the entire world simultaneously (a feat that would be impossible otherwise), but it inevitably introduces distortions in fundamental spatial attributes. These distortions can significantly alter our geographical perspective. Despite severe limits on the amount of detail that can be shown, scale reduction lets us view at a glance geographical phenomena that could never be seen through direct observation at true scale. An instantaneous temporal view can be gained through cartographic averaging or time slicing, but the variably changing world is never frozen by cartographic technique. Thus map-derived information is likely to be out of date in some proportion to the natural rate of change of the map referent involved. The constraints on the number of variables that can be placed on a single map through combinations of point, line, and area symbols force the cartographer to select his subject matter frugally. This process can have a valuable clarifying effect, but it can also lead to the danger that the most crucial variables will not be chosen and that, therefore, conclusions regarding spatial relationships drawn from the map will be in error. The abstract nature of point, line, and area symbols may facilitate objective decision making, but the vital, life-related elements of the referent space may go unrecognized. Manipulating cartographically symbolized geographical variables is much more convenient than dealing with the symbol referents directly, but it introduces the danger that the map world will be mistaken for the real world.

The basic truthfulness of a map is what contributes most to its practical value in modern society, as well as to the fascination it holds for the writer who continually searches for truth. Yet a map can never be more than the elaborate fictions of cartographic methodology; it can be truly beautiful and useful beyond its basic reality for the creative user, while at the same time being a cold, insensitive document for the unimaginative reader. Possibly most important, a map is basically quantitative: those things which have proven difficult to measure but which are essential to humanity are seldom found on a map. Yet this allows decision makers to perform in abstract contexts. It is precisely because of these paradoxes that a map captures the imagination of a writer. The more a writer delves into the complex character of a map, with its inconsistencies, dualities, and capacities, the more wonderful he thinks it is.