

## A Production Utopia?

### RTP and the North Carolina Research Triangle

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*The effort to cast the central Piedmont region of North Carolina as the Research Triangle has been promoted since the mid-1950s. It has relied, in particular, on the development of a 7,000-ac science and high-tech research complex—the Research Triangle Park (RTP)—as the region’s geographic, economic, and symbolic core. This paper explores cultural and material constructions of place and region that have evolved with, and in some ways driven, this project. Depictions of the RTP site’s historical emptiness, in this sense, beckoned for replacement with a more modern economic and cultural geography of science and technology. The purpose of the paper is thus to raise questions about the outcomes of this local and regional transformation by examining the interplay of the idea and reality of RTP as a “production utopia” built around notions of a prosperous modernity with a basis in the work of knowledge production.*

**KEY WORDS:** Research Triangle Park, science parks, North Carolina, urban development, landscape

#### INTRODUCTION

In the late 1950s, one of the first promotional brochures for a Research Triangle Park featured a map showing a neat

triangle of land in the center of North Carolina connecting the cities of Raleigh, Durham, and Chapel Hill. The image depicts little sign of humanity in the state beyond these principal municipalities and clusters of activity associated with the major research universities found in each. The Raleigh-Durham airport appears as one of the few non-university buildings identified within the Research Triangle, while in the center a large rectangular space stands out prominently. This alluring blank space on the map represented the Research Triangle Park (RTP) (Fig. 1).

Of course, any three cities or towns on the North Carolina map could have been made to describe a neat triangle. What made Raleigh, Durham, and Chapel Hill distinctive as the vertices of the Research Triangle (or commonly called today, the Triangle) was never just a matter of spatial circumstance. The effort to cast the central Piedmont region of North Carolina as the Research Triangle has been guided and promoted by state government, business, and university leaders since the mid-1950s. It has relied, in particular, upon the project to develop a 7,000 ac science and high-tech research complex—RTP—as the region’s geographic, economic, and sym-

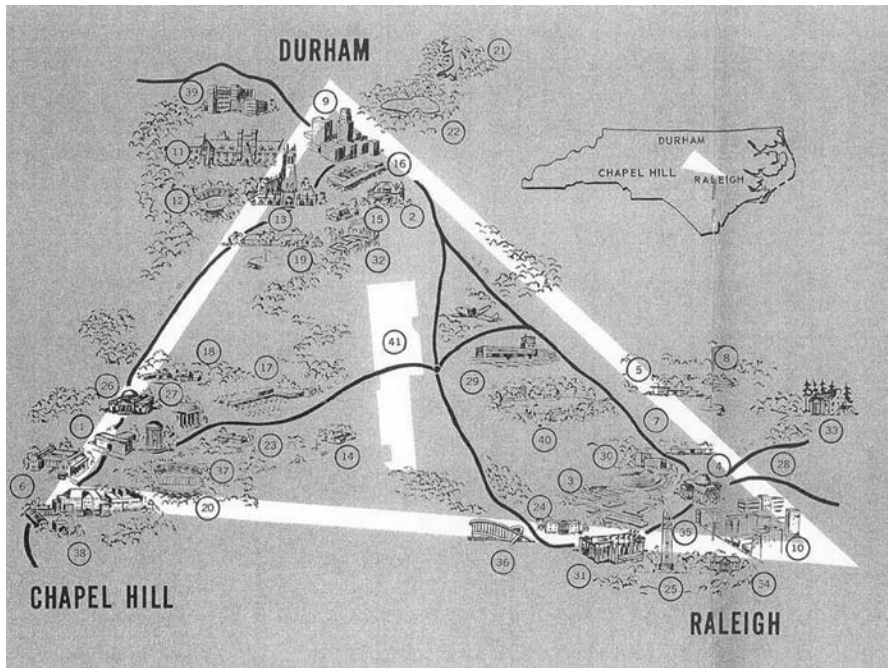


Figure 1. Location of RTP site (white rectangle, at center) within North Carolina's Research Triangle, as shown in "Life in the Research Triangle" brochure, undated [ca. 1959–1960] Raleigh, NC: Research Triangle Park. In Folder 2419, Box 137 in the Research Triangle Foundation Records #5081, Southern Historical Collection, Wilson Library, University of North Carolina at Chapel Hill.

bolic core. The actual materialization of RTP was ultimately contingent upon its successful promotion and the related selling of the Research Triangle idea to selected constituencies. In order to achieve this, the places involved had to be reinvented and refurbished, with certain histories rewritten and others obscured or removed. In this sense, one key challenge to the establishment of RTP was a conceptual one, even as the physical landscape itself still had to be cleared of existing homes and economies in order to be turned into a proper research campus.

In 1962, U.S. Secretary of Commerce

and former North Carolina Governor Luther Hodges introduced these three definitions for the Research Triangle that continue to be relevant today:

First, it is an actual tract of land—the five thousand acre [now 7,000 ac] Research Triangle park spread over the beautiful central Carolina countryside, which a decade ago was empty pine-land and where now a half-dozen laboratories and research buildings are a promise of even more to come. Second, the Research Triangle is the larger area surrounding the park, triangular in

shape, with corners at Raleigh, Durham, and Chapel Hill—the homes of three of North Carolina’s greatest institutions of higher education, North Carolina State College [now University], Duke University, and the University of North Carolina. Finally, and most important, the Research Triangle is an idea that has produced a reality . . . (in Link 1995, 1–2).

Hodges’ third point is the focus of this paper. RTP’s development came not just because of formal political and financial efforts but also through a concerted discursive project to redefine the area and realign its regional identity. Unlike the molecular manipulations that now take place in the labs of RTP itself, there was no great engineering challenge to be surmounted in creating the Research Triangle or its namesake science park; rather, RTP’s early planners needed to create, package, and sell an idea—that of a prosperous modernity with a material basis in the work of knowledge production—that could be used to advance their agenda for the metropolitan region and for the state. Integral to this endeavor, from the start, was the effort to associate political, social, and economic prestige with RTP in connection with its larger Triangle region (Castells and Hall 1994; Westhead and Batstone 1998), and yet to keep RTP separate from its local surroundings in other ways. In the next section, we turn to constructions of the RTP site’s historical emptiness that beckoned to be replaced with a more modern economic and cultural geography of science and high-tech, a landscape imagined and remade as what we will call a production utopia.

#### DISPLACING HISTORIES, REPLACING GEOGRAPHIES

In order to create a Research Triangle Park that would attract modern corporate clientele, early promoters knew they would need to diminish the area’s cultural and historic associations at two distinct levels: that of the inhabited landscape of the RTP site itself and, more regionally, with the social and economic history of the South.<sup>1</sup> At the same time that RTP boosters sought to disassociate the project from certain cultures and histories of its place, they also needed to portray a site well-connected to transportation facilities, urban amenities, and scientific researchers and facilities. By establishing and promoting collaborative relationships with the three prominent research institutions at the Triangle’s geographic vertices—North Carolina State, Duke, and the University of North Carolina at Chapel Hill—RTP planners could offer corporations access to a pool of potential researchers, and offer the state the model of a future “new-line” regional economy in which to place its most educated (and publicly subsidized) citizens, i.e., a reversal of the brain drain. Before that, however, RTP’s landscape had to be remade both on the ground and in the discourse used to talk and think about people and places.

Geographers and historians of cartography have examined the normative and prescriptive nature of mapping and other forms of spatial representation which portray places (and histories of places) as socially empty, and thus, “lying in wait” for certain kinds of “improvement” or “development.” These are commonly associated with fundamental shifts in property

relations and governance (Harley 1988; Scott 1998; Kirsch 2002; Pickles 2004). Indeed, of the various early accounts of RTP and its development, one feature that stands out is the apparent emptiness of the RTP site itself. In his 1962 gubernatorial memoir, for instance, Secretary Hodges described a “Research Triangle park spread over the beautiful central Carolina countryside, which a decade ago was *empty pineland* . . .” (in Link 1995, 1; emphasis added). Or, as Hodges later recalled of the Research Triangle, “There were squirrels in the pines and foxes deep in the woods in 1958, but unfortunately they had little human company” (in Larrabee 1991, 67–68).

The supposed absence of humanity surfaces repeatedly in two informative (but fundamentally “insider”) histories of Research Triangle Park, Larrabee’s (1991) *Many Missions*, published by the Research Triangle Institute, and Link’s (1995) *Generosity of Spirit*, published by the Research Triangle Foundation.<sup>2</sup> In the first, we find the land prior to RTP as, “those all but empty acres . . . useful mostly for holding two counties together” (Larrabee 1991, 23). The second emphasizes the unsavory marginality of the land that became the site of RTP: “The sparsely populated land wasn’t worth much . . . It [had] rolling hills, second-growth scrub, marginal family farms, empty fields, modest and scattered residences, broomsedge, and an unknown number of stills” (Link 1995, 69). With this, unlike former Governor Hodges’ reflections of the RTP site, we begin to see a place not entirely empty but rather one lacking a certain type of prosperity, or as another researcher described it, an “underutilized scrub pine land between major college towns” (Walcott 2001, 525).

Research Triangle Park proponents sought to portray a particular vision, but within this ideal there was little room for previous claims to the land or the socially or economically marginal lives that had made the place home. A productive science park could spring forth in civilizing redemption of vacant lands, but RTP’s boosters had little interest in toting moonshiners and tobacco farmers with them into the post-industrial future. RTP planners sought to refashion a certain space in central North Carolina as part of a larger program to buoy the state’s economic prospects, establishing both a change in land use and a symbolic shift in the broader economic agenda (for a related point, see Massey, Quintas, and Wield 1992, 170).

The historic record of RTP carries only hints of these other lives or the alternative futures that the Research Triangle might have tendered. A cadastral map from 1960 shows more than ninety separate parcels of land, nearly all of which would later be subsumed into the Research Triangle Park’s tidy campus (Fig. 2). We can only imagine most of the activities, lives, and histories that played out in these plots, though a few glimpses remain more fully documented. One former resident of the area told the *Durham Morning Herald* that he had parted with his 32 ac for \$20,000, but “You know, the biggest objection I had to the Research Triangle Park was that they took all the turkeys. That was great turkey land. I hunted there every day I was off and I reckoned I killed 116 turkeys during the years we lived there” (in Larrabee 1991, 69).<sup>3</sup>

The Durham County Wildlife Club relocated, but refused to vacate its RTP location altogether. Instead, the club parlayed 30 ac it owned in the northern portion of

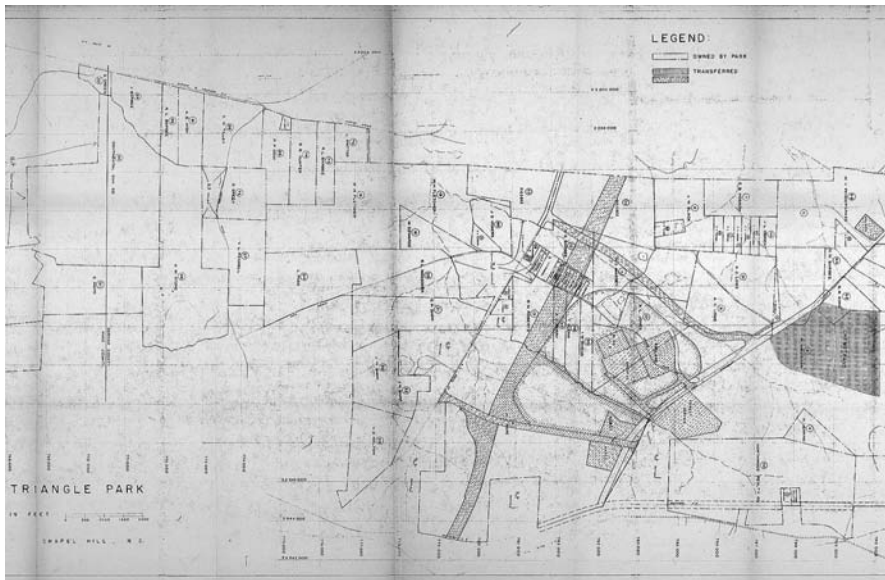


Figure 2. Cadastral map of Research Triangle Park site, from 1960 survey map (updated through September 1965) from Folder 2983, Box 161 in the Research Triangle Foundation Records #5081 (OS/8), Southern Historical Collection, Wilson Library, University of North Carolina at Chapel Hill.

the park, on the site now occupied by IBM, for 95 ac in southern RTP and a cash buyout of \$105,000 (Link 1995). Clearly, at least certain portions of the Research Triangle Park site were not only not empty, they were also highly valued by their residents.<sup>4</sup>

From the outset, the explicit intent behind creating a Research Triangle Park was two-fold: first, to boost the lagging fortunes of a state that ranked next-to-last in the nation in per capita income in 1952, and second, to halt the steady exodus of local university graduates fleeing to more promising regions for employment (Jones 1978; Link 1995). If these were the most explicit goals, there was also a subtler project at work. George Simpson, a sociology professor at UNC-Chapel Hill who became the first full-time director at RTP,

made this latter vision clear in a speech to the UNC faculty in February 1957:

What we are attempting here is really the stimulation of a general movement, the development of a new state of mind, among the people of the state. Our problem in North Carolina and in the South is not essentially technical; we have available to us the same scientific information as is available elsewhere . . . Our problem is essentially cultural—it is the failure of our people to grasp the use of science in industrial development, the failure to put to work what is available, the failure to begin these chain reactions of research and invention and developing which are the hallmark of mid-twentieth century life. (in Link 1995, 49)

If, for Simpson, the problem was an essentially cultural one, then the solution built into the RTP concept was perhaps singularly geographical: a program for modernizing both economy and identity that was built around the concept of a bounded research “park” located in between three geometrical points. The land within these points, holding as it did three major universities, constituted in Simpson’s view, “North Carolina’s Secret Weapon” (Simpson 1957). In the following section, we examine some of the symbolic and practical dimensions of science and technology parks, and RTP in particular, as specialized sites for knowledge production, and we raise questions about the place of those sites in urban and regional development strategies and in wider knowledge economies.

#### SPLENDID ISOLATION

It is as though knowledge were made in production utopias, where unity, order and harmony secure a peculiarly invulnerable social order which can yet represent itself apart from and against the existing culture.

Simon Schaffer (1998, 149–150)

The historian of science Simon Schaffer’s account of the establishment of academic physics laboratories in pastoral settings in late nineteenth century Britain provides a suggestive point of departure for an examination of the modern science and high-tech research park’s spatial and symbolic imaginary. For Schaffer (1998, 149), the creation of such laboratory spaces, modeled in some ways after the conventions of the Victorian country house, suggested a “bucolic epistemology” wherein

social withdrawal could be seen as “a precondition of access to universal truths.” Contemporary research parks like RTP, of course, complicate this ideal of pastoral science to a great extent. In the first place, they are firmly enmeshed in networks of economic production as well as those of government scientific and regulatory institutions—and thus in “interested” rather than “disinterested” knowledge production—that reflect qualitatively different kinds of relations than those in which Schaffer’s country physics laboratories were embedded. They are also commonly developed, quite explicitly, as centerpieces for urban and regional development strategies (see, e.g., Massey, Quintas, and Wield 1992; Castells and Hall 1994; Shearman and Doloreaux 2000; Cooke 2002), rather than as retreats from the urban *per se*. Yet like the country laboratory, the campus of the commercial research park is both a real and symbolic landscape, the space of (and for) a secluded technoscience predicated on at least a sense of social withdrawal.

At RTP, even as floor space has increased from just over 200,000 ft<sup>2</sup> in 1960 to over 15,000,000 ft<sup>2</sup> today, and as the number of workers in the park has increased during the same period from 300 to perhaps 50,000, the sylvan and park-like qualities of the 7,000 ac campus are maintained through rigorous zoning restrictions. Such restrictions, together with the real estate market, tend to reinforce an “elitist occupational structure” that matches descriptions of science parks more generally elsewhere (Massey et al. 1992, 189–191), and which also exemplifies the geographic division of labor in what Castells and Hall (1994, 2) have called “the mines and foundries of the in-



*Figure 3. Knowledge workers at ease in the landscape outside the GlaxoSmithKline building, Research Triangle Park, North Carolina. Photo by Scott Kirsch.*

formational age.” In fact, corporations locating their research operations at RTP must conform to an array of covenants and regulations designed to ensure that any burrowing or smelting that occurs on site is primarily of the intellectual sort. The footprint of buildings can occupy no more than 15% of their company’s land area, trees and landscaping must meet certain specifications, and “no odors, noise, vibration, fumes, dust, gases, smoke, etc . . . [are] permitted to cross property lines” (Minutes of the Board of Directors of the Research Triangle Park, 23 July 1959 in Link 1995, 80; Nunnally 2003). The effect on RTP’s site is one of quiet clean economic output in a setting that confers an aura of prosperity and modernity. Buying

into RTP’s ordered and harmonious landscape, in fact, with land prices currently running at \$60,000/ac (or \$75,000/ac for lakefront sites), has become a rather expensive proposition (Nunnally 2003).

The utopian image of RTP as a setting for cloistered and efficient knowledge production is perhaps nowhere better expressed in the landscape than in the modernist honeycomb completed in 1972 (with an addition in 1988), to house research and development for the pharmaceutical company Burroughs Wellcome (Fig. 3). The building is now home to the successor pharmaceutical giant GlaxoSmithKline, the park’s third largest employer, which bought out its RTP neighbor Burroughs Wellcome in 1995. Architect

Paul Rudolf's design, featuring hexagonal hallways and structural columns leaning to 68.5°, is perched on a sprawling hilltop site amidst pine trees, jogging paths and a softball field. It indeed suggests a sense of the "unity, order and harmony" that Schaffer evokes (1998, 149–150), which secures "a peculiarly invulnerable social order."<sup>5</sup> But in what sense (even after the initial displacements of people and histories) are science parks represented "apart from and against the existing culture"?

Massey, Quintas, and Wield's (1992) *High-Tech Fantasies*, a study of several U.K. science and high-tech parks that brings together cultural, political economic, and regional policy analyses of research parks in their urban and regional contexts, offers related questions to consider. In Birmingham, for example, the authors note the emergence of a two-tiered labor market, characterized by steady growth in low-paid employment and a widening of income differentials in the city. Such findings were not surprising for Massey, Quintas, and Wield (1992, 204) since, they argue, "By their very nature science parks represent an attempt at a spatial separation of different elements of the technical division of labor." The notion that research and development operations should be geographically separated from production in this way, the authors also remind us, is not the only available model for how a "knowledge economy" may work to the benefit of its local and regional economies.

Such separations of a technoscientific elite from wider processes of industrial production are, in reality, rarely total, for many research parks actually permit direct production processes. At RTP, in fact, manufacturing with a certain degree of R&D input is permitted on the premises if 10%

or more of the staff are engineers (Nunnelly 2003). Nevertheless, according to a 1999 economic impact assessment commissioned by the Research Triangle Foundation, the mean percentage of scientists and engineers in RTP firms was a sizable 45.5% (as an average percentage of workforce by firm; Hammer–Siler–George—Associates 1999).<sup>6</sup> What is more, the work carried out at GlaxoSmithKline's efficient looking beehive—or those of IBM, Nortel, the Research Triangle Institute (RTI), and the U.S. Environmental Protection Agency, to list the park's other top employers—is itself, quite obviously, a part of large scale production processes, even as the dirtier aspects of industrial production are kept away from the park. Both the image and the artifice of separateness in research park landscapes provide a powerful symbolic currency to planners, policy makers, and developers (one need think only of the value placed on "best places" ratings to gain a sense of this; see Logan and Molotch 1987; McCann 2000). "In many cases," as Massey, Quintas, and Wield (1992, 204) observe, "this spatial separation reinforces the social divide through an explicitly elitist presentation. But even when it is not so, the geographical separation of groups (R&D and direct production workers) can only serve to reinforce the social polarization which is already so pronounced within the occupational structure of high-tech industries."

What these researchers challenge us to examine about science and high-tech parks, then, is not necessarily found among the issues raised in conventional economic impact analyses. For example, the 1999 impact report (Hammer–Siler–George—Associates 1999) celebrates the high average incomes of 40,000 full time RTP workers

(\$54,600), the more than \$87 million estimated spent annually by RTP workers in the area, and real property taxes paid to Durham County (\$16 million) and Wake County (\$1.4 million). For Massey, Quintas, and Wield (1992, 8), research parks may indeed be highly productive in generating value, since they were developed precisely to “provide conditions for the more successful commercialization of the discoveries of basic science.” However, they view science parks, more specifically, as “property developments carried out by particular agents with specific interests” (Massey, Quintas, and Wield 1992, 9). Taking RTP as an example, this is true in at least two ways. First, much of the work carried out at the RTP is integrated into products, including GlaxoSmithKline’s AZT drug, the UPC bar code, or Astroturf®, and structured to emerge and circulate in the world in specific ways, based largely on particular (commercial) models of scientific and industrial innovation. Second, they are property developments on the part of universities, often in terms of real property and also as platforms for developing corporate and government relationships. At RTP, in fact, the three universities hold the ultimate title to RTP land, albeit a title which they have no wish to cash in, so highly valued are the institutional relationships that connect the area universities to the RTP.<sup>7</sup> For as Luther Hodges conceptualized it in 1962, a larger Research Triangle has in some ways emerged. With an estimated 50,000 people now working at the Park daily, going home to a changing social geography of communities spread across three counties, it is clear that the interplay between the idea and the reality of RTP and the North Carolina Research Triangle—landscape and region as *production*

*utopias*—will continue to evolve and to transform urban, regional, and state economic development strategies in important but by no means entirely predictable ways.

#### RESTRUCTURING THE TRIANGLE

A recent promotional brochure from RTP offers a useful update on the realization of the RTP vision (Fig. 4). The Earth rests on the cover, blooming auroras that radiate to all points of the compass. The Americas fill the center of the globe. Etched boldly in red and white, a scalene triangle juts from the eastern half of North America. This triangle, “where the minds of the world meet,” represents the North Carolina Research Triangle (Research Triangle Foundation n.d.).

Whether neo-Ptolemaic or simply sleek and modern, the scheme promoted by the brochure is far from accidental. In fact, the brochure is but one installment in a decades-long effort to define a region—the Research Triangle—and create an image that resonates with the iconographies of progress, exploration, science, and modernity that appear on its cover. To a degree, the brochure is accurate: certain minds of the world do meet at Research Triangle Park, but only those who are carefully selected and only by the terms that are rigorously applied. The consistent prominence of prosperity and prestige in RTP promotions matches what studies of science parks have found here and elsewhere. Economists Link and Scott (2001, 11–12) suggest that RTP is “the most notable and successful of all science parks in the United States,” though they make this claim not on the basis of its economic output but rather for the park’s “innovative environment” and “entrepreneurial leadership.”

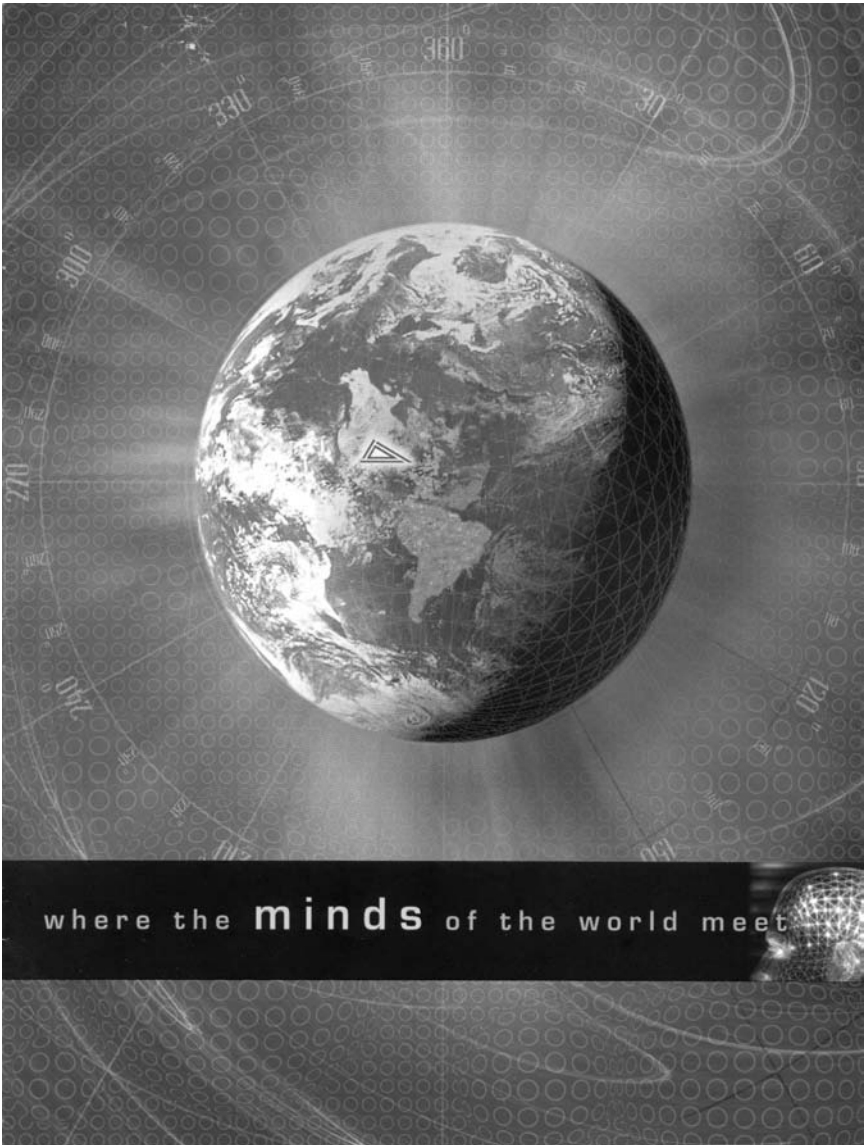


Figure 4. Cover image from Research Triangle Foundation brochure, "Where the Minds of the World Meet." (Research Triangle Foundation n.d.). Research Triangle Park, NC: Research Triangle Foundation.

While Westhead and Batstone's (1998, 2208) study of U.K. science parks found that corporate location decisions were overwhelmingly due to the "prestige and overall image of the site," another study of science parks in Canada argued that although such settings are intimately linked to prestige, the parks themselves did not have an appreciable effect on metropolitan regions' economic structure (Shearmur and Doloreaux, 2000; but see Brewer 1994). RTP similarly sits at a juncture for processes occurring at a number of spatial scales. For Walcott (2001, 527–528), "RTP clearly is in but not of the South, a global node station whose affluence assists the state coffers but exists more as an island than an example of Carolina dynamism. A paucity of local financiers speaks to this situation of a difficult transition from tobacco to high tech in the local mindset." Whether or not we interpret such a geography as a success or failure of capital's regional mindset, it is clear that the work taking place at RTP is at once local and apart from the local in important ways, even as land prices in RTP commuter communities from Cary to Carrboro continue to rise alongside growth in new economy jobs.

Unlike the replicable experiments of, say, Victorian country physics laboratories, it is impossible to know how Raleigh, Durham, and Chapel Hill and the many points on the map around and in between their triangle would have developed during the past five decades *without* its science and high-tech park. It is evident that, while RTP and its corporate clientele bathe in the light, some of the nearby communities upon which the Park depends have struggled. By the broadest of eco-

nomical measures, the cities of Raleigh, Durham, and Chapel Hill have seen their fortunes rise along with their emergent identity as part of the Research Triangle. For Durham in particular, however, the relationship with RTP has not always been smooth.

Approximately 75% of Research Triangle Park rests in Durham County, just eight miles south of the city's downtown. Durham's reluctance to supply water to RTP at reduced in-city rates created years of delay and irritation to RTP planners in the early stages of development (Jones 1978), and the threat of Durham annexing the Park as a means to tap more directly into tax revenues weighed upon RTP from its beginning. The principal early fundraiser for RTP, banker and former state senator Archie Davis, later recalled why he had turned first to donors in his hometown of Winston-Salem to solicit contributions for the project: "Down the road I had to tell them down in Durham when they were thinking about taking this place [RTP] over, I said, 'don't forget if it hadn't been for the people in Winston-Salem, [there] wouldn't be a Park down here'" (Link 1995, 70).

Durham included RTP annexation in the city's 1973 Urban Growth Area plans, and in 1985 several Durham legislators announced they had drafted a bill to extend the city's limits to encompass most of RTP (Moore 1985). In testimony before the North Carolina General Assembly, Davis recounted the statewide contributions that had helped to create the research park. Durham's annexation attempt proceeded to backfire when the Assembly passed a state law protecting special districts such as RTP from annexa-

tion and specifically ensuring RTP's continued access to Durham city services (Cornelius-Brown 1985; Link 1995).

Corporations whose earnings are among the most profitable of any in the world maintain facilities at RTP, yet Durham, the "City of Medicine," receives no direct tax benefit from RTP businesses' production or employees' personal salaries. While RTP's pharmaceutical and other corporations plug nearly \$1 billion each year into "searching for answers to the most difficult challenges facing the world today . . . [such as] a cure for cancer, a drug to treat Alzheimer's . . . and transgenic crops" (Research Triangle Foundation n.d., 3), many census tracts within Durham remain classified as Medically Underserved Areas for basic health care needs (Crenshaw 2003). The juxtaposition of these very different corporate and civic worlds highlights evident economic and social discontinuities between RTP and Durham, despite their physical proximity.

Even as North Carolina's central Piedmont and its cities try to embrace and ride the material growth promoted in the RTP concept and its landscapes of high-tech knowledge production, the discursive project of the Triangle has also led to a certain loss of local identity. As newcomers to the area quickly discover, the perception of Raleigh, Durham, and Chapel Hill as "The Triangle" tends to diminish distinctions that might otherwise be made between these communities. The cities are now actively concerned with how they have been "branded" commercially, and have set out to highlight the Triangle as "a family of communities" rather than simply an abstraction of Euclidean geometry (Krishnan 2003, B-1; more generally, see Ward

1998). In what can be seen as a discursive and scale-sensitive response to the maturation of the Research Triangle's own conceptual project, Raleigh, Durham, and Chapel Hill now find themselves working to reestablish their municipal personalities even as they embrace a regional affiliation and the prosperity and disparities that accompany it (Ward and Gold 1994, 7).

Of course, considering the Research Triangle Park's ahistorical, selective, and exclusive conception, its mature form should cause little wonder. Despite the image that promoters' speeches and maps described, the land where RTP now sits was not simply empty space but rather held an array of lives, buildings, and economies that failed to merit standing in the modern production-oriented landscape of a science research park. The Research Triangle Park may now cast an image of prestige broadly across the state as a production utopia much along the lines that its planners had hoped, but like many utopias and science park developments it also casts a long shadow that geographers and other social scientists and historians must work to better understand and illuminate.

#### NOTES

1. Link and Scott (2001). RTP planners were not alone in their efforts to reconstruct a New South through strategies linking municipal regions, and attempting to link further those regions with economic processes operating at larger geographical scales, at this historical moment. See, for example, Barry Flanagan's (2003) social and historical geography of economic development in Greenville-Spartanburg, South Carolina.

2. As the two principal entities upon which RTP rests, the Research Triangle Foundation

manages land acquisitions and leasing, and recruits corporations to the RTP site; the Research Triangle Institute (now RTI International), RTP's first occupant, is a non-profit which carries out a wide range of scientific research and support services. Recently RTI has expanded into international political and development projects, including most notably a March 2003 \$163 million contract (for year one alone, with renewal anticipated) to develop local governance regimes and, to a lesser extent, to restore infrastructure and services, in post-Hussein Iraq (Arandel 2004; see Klein 2004; see also the RTP's website: <http://www.rti.org>).

3. Another resident refused to sell and still owns five acres in the center of the research park. The clipped report we receive from a 1959 memo of this recalcitrance barely hides its author's irritation: "[He] . . . will not sell . . . has three houses—all near highway and occupied by kinfolks" (in Link 1995, 84; ellipses in Link).

4. A 1960 letter from an appraiser assigned to gauge the RTP site's value, further reveals the array of land uses and properties extant prior to the research park's development. In his note, the Pinelands Company's William Maughan writes that a careful appraisal of the RTP site would be a "time-consuming and involved undertaking" due to the many buildings, farms, and other improvements located at the RTP site (see Maughan letter to Allen Strand 1960).

5. Rudolf, a former dean of architecture at Yale University, designed the addition as well. Extracted from the RTP landscape, Rudolf's vision of the building has been circulated via the 1983 sci-fi film *Brainstorm*, in which it serves as the headquarters of a futuristic psychotropic research corporation.

6. Scientists and engineers are followed (as an average percentage of workforce by firm) by skilled technicians: 22.4%; managers or administrators: 16.8%; clerical workers: 8.7%; semi-

or low-skilled production workers: 5.2%. These data do not reflect the eight to ten thousand contract workers estimated to be at RTP (Hammer-Siler-George-Associates 1999).

7. The 1956 articles of incorporation for what would become the Research Triangle Foundation stipulate that upon dissolution, "all assets of the corporation shall be divided equally among the University of North Carolina at Chapel Hill, North Carolina State [University], and Duke University . . ." (quoted in Link, 77–78).

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