

Constructing the Trans-Israel Highway's Inevitability¹

Yaakov Garb

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Author's address:

The Floersheimer Institute for Policy Studies²

Diskin 9A

Jerusalem 90440, Israel

ygarb@cc.huji.ac.il

ABSTRACT

I discuss the role and construction of a sense of inevitability in the forwarding of large infrastructure and development projects. I suggest that the growth of a project's inevitability—its emergence from being one contested notion among others to being a bound-to-happen solution that overwhelms the space of alternatives—is one of the most valuable achievements for project proponents; and that undermining it, the crux of opponents' efforts.

I present several methods through which such inevitability is created, illustrating them through political and rhetorical moves through which an Israeli megaproject—the Trans-Israel Highway—was advanced. These included the following:

1. **Shaping and proliferating a problem definition that pointed inescapably to the proposed project as a solution.** In this case, drawing on an outmoded transport paradigm and shaky comparative statistics to shape and proliferate a problem framing (of congestion and a "lag in road infrastructure") whose obvious remedy was additional road infrastructure.
2. **Rewriting and telling the project's history as the timely orderly unfolding and gathering momentum of a long-established plan.** This post-hoc account masked the project's halting, opportunistic, contested, and haphazard trajectory, its mutating nature, and the willful efforts necessary to propel it forward in the face of opposition.
3. **A concerted effort to close debate onto issues internal to the project itself.** Thus project proponents strove to limit discussion to issues such as the Highway's staging, costs, routing, etc., and exclude from debate any discussion of—and spokespeople for—issues outside this project "box," especially those that might have raised questions about the need for the box itself.
4. **Attempts to bring the project's future into the present and past.** These achieved or presented as already achieved, components of the project prior to its approval and execution. These prefigurative "facts on the ground" symbolically and materially blurred the contingency of project approval and preempted

Together, these discursive-political ploys draw on and rework the past, present and future so as to narrow the space of possibilities to a single outcome: the proposed project. This creation of inevitability is by no means unique to the Trans-Israel, or even to "bad" projects. It is, I propose, a crucial phase in the construction of most, perhaps all, large projects of this kind. These observations below are thus offered both for their theoretical insight into the politico-rhetorical processes through which such projects are forwarded, and as a practical aid to those who wish to question and reverse the seeming inevitability of bad ones.

Outline of essay

Introduction

- Overview of claims
- The Trans-Israel Highway

Mechanisms of Inevitability Construction

1. Inevitability through problem definition
2. Inevitability through the past
3. Inevitability through limiting discussion to the project “box”
4. Inevitability through bringing the future forward

Conclusion

INTRODUCTION

Overview of claims

This essay discusses the creation of a sense of inevitability as a key dimension in forwarding a major infrastructure project, the Trans-Israel Highway. I illustrate some of the rhetorical and political moves that helped achieve this inevitability for the Trans-Israel Highway.

While important in itself as an elucidation of an infrastructure project declared to be the country’s largest ever, the lessons of this analysis extend beyond this project and the Israeli context. I would argue that the construction of inevitability is a prerequisite of any large project. A low profile can be important in the early phases of a project, in the vulnerable stages while it gathers resources and takes shape; but when it comes to approval and resource allocation, before contracts are signed and asphalt is poured, a road—especially something as massive as a proposed 300 kilometer highway running the length of a small country—must become substantial in people’s awareness. From a contested tenuous notion, one among many, it must be stabilized and ultimately come to overwhelm the space of possibilities. A sense of inevitability is one of the most valuable achievements for project proponents; undermining it, the crux of opponents’ efforts.

There are several senses of inevitability that can be disentangled. There is straightforward and often positive sense: the confidence and vision of a project’s proponents, their own conviction (real or projected) that the project is going to happen, no matter what, and their vigorous actions based on this. One can certainly identify this aspect of inevitability in the case of the Trans-Israel, especially after once the project was taken over by a well funded public company, formed expressly to execute the project. The key figures in the company—most of them former high ranking military officers—were adept at making things happen, with a personal history of transforming concept into reality. Stemming from their confidence, know-how, and resources was a set of unequivocal actions—the systematic lobbying, preparation of plans, enlistment of supporters, and so on—which built a momentum (velocity and mass of

efforts) that swept over planning apparatus, and which detractors could simply not keep up with.

But I want to focus here on some more subtle senses of inevitability. These worked in parallel to the more brute efforts of pushing a project forward, and more obliquely: dissolving the possibility and relevance of alternatives rather than meeting them head on. Power has been defined as the ability to have one's point of view be seen as point-of-view-less. I will present four discursive-political ploys that augmented the project's power in this way, drawing on and reworked the past, present and future so as to implicitly narrow the space of possibilities toward a single outcome: the proposed project. The four mechanisms I discuss are the following.

1. **Shaping and proliferating a problem definition that pointed inescapably to the proposed project as a solution.** In this case, drawing on an outmoded transport paradigm and shaky comparative statistics to shape and proliferate a problem framing (of congestion and a "lag in road infrastructure") whose obvious remedy was additional road infrastructure.
2. **Rewriting and telling the project's history as the timely unfolding and gathering momentum of a long-established plan.** This post-hoc account masked the project's halting, opportunistic, contested, and haphazard trajectory, its mutating nature, and the willful efforts necessary to propel it forward in the face of opposition.
3. **A concerted effort to close debate onto issues internal to the project itself.** Thus project proponents strove to limit discussion to issues such as the Highway's staging, costs, routing, etc., and exclude from debate any discussion of—and spokespeople for—issues outside this project "box," especially those that might have raised questions about the need for the box itself.
4. **Attempts to bring the project's future into the present and past.** These achieved or presented as already achieved, components of the project prior to its approval and execution. This is achieved, for example, through presenting the project under deliberation, where possible, as an accomplished fact; ensuring that other ongoing planning accommodates it in advance; and by getting ongoing schemes that would have some interface with the future project named as its first phase. These prefigurative "facts on the ground" symbolically and materially blurred the contingency of project approval and preempted alternatives.

The Trans-Israel Highway

The Highway is widely regarded as Israel's largest ever infrastructure project, ultimately planned to run about 300 kilometers, from the very north of the country to south of Beer Sheva (see Fig. 1).³ Between 3 to 4 lanes in each direction (depending on the region), the Highway is linked to the rest of Israel's road network through latitudinal connecting roads.⁴ Thus it joins the three existing major north-south roads of the narrow country: Highway Two, which runs along the coast, Highway Four (an earlier eastern bypass of the Tel-Aviv area now surrounded by urban development on both sides and quite congested), and in the Highway's central portion, Route 444,

which is a winding 2-lane road, around which the new Highway weaves.

Several benefits have been claimed for the project at various times—reducing traffic on the crowded roads at the center of the country by acting as a bypass of Tel Aviv, connecting Israel’s periphery (Negev and Galilee) to its center, facilitating deconcentration of workplaces and commerce from the Tel Aviv region, and providing employment in an ailing economy. As with most large projects in Israel, geopolitical motivations have sometimes been suggested (strengthening the development of Jewish development along the green line, and especially in the “Triangle Area,” which has a large Arab population, and providing a corridor for troop and military equipment movement between Israel’s northern and southern fronts during a war).

Environmental opposition to the project was keen, and in many ways constituted a landmark in the maturation of Israel’s environmental movement, which had traditionally been concerned with open space preservation. Key arguments against the project were that it ran through some of the last remaining non-urbanized areas in Israel, that it would attract sprawling development to these areas, east of the Tel Aviv region, that it would constitute only a temporary solution to Israel’s growing traffic problems, encouraging car dependency, and undermine or distract from the fulfillment of strategic needs for improved public transport and compact urban development.

The central and most trafficked section of the Highway, about 86 km in length, was put out for private sector construction and operation as a toll road, under a \$1.2 billion BOT (build, operate and transfer) model in which the government provides the right of way to a private consortium to construct and operate the Highway as a toll road over a period of 30 years, after which it reverts to the government of Israel. The consortium will use these toll revenues to repay its loans for the project, supplemented by government funds should the revenues fall short of projections. This central section has already been largely constructed and operates as a toll road, and includes 10 interchanges, 94 bridges, and a twin tunnel half a kilometer long.

The project, initially launched by the Public Works Department of the Ministry of Construction and Housing, was transferred to the Cross-Israel Highway Company Ltd., a governmental company, which prepared the evaluation, planning, statutory approvals, and international tender for the project, and accompanied it through the tender competition process. The tender was won by Derech Eretz, a consortium of several companies, which, after some reshuffling, now consists of Africa-Israel Investments Ltd. (in partnership with Alon Israel Oil Co. Ltd.); Housing & Construction Holding Co. Ltd., and Canadian Highways Infrastructure Corporation.

Fig. 1: Cross-Israel Highway Company map of the project



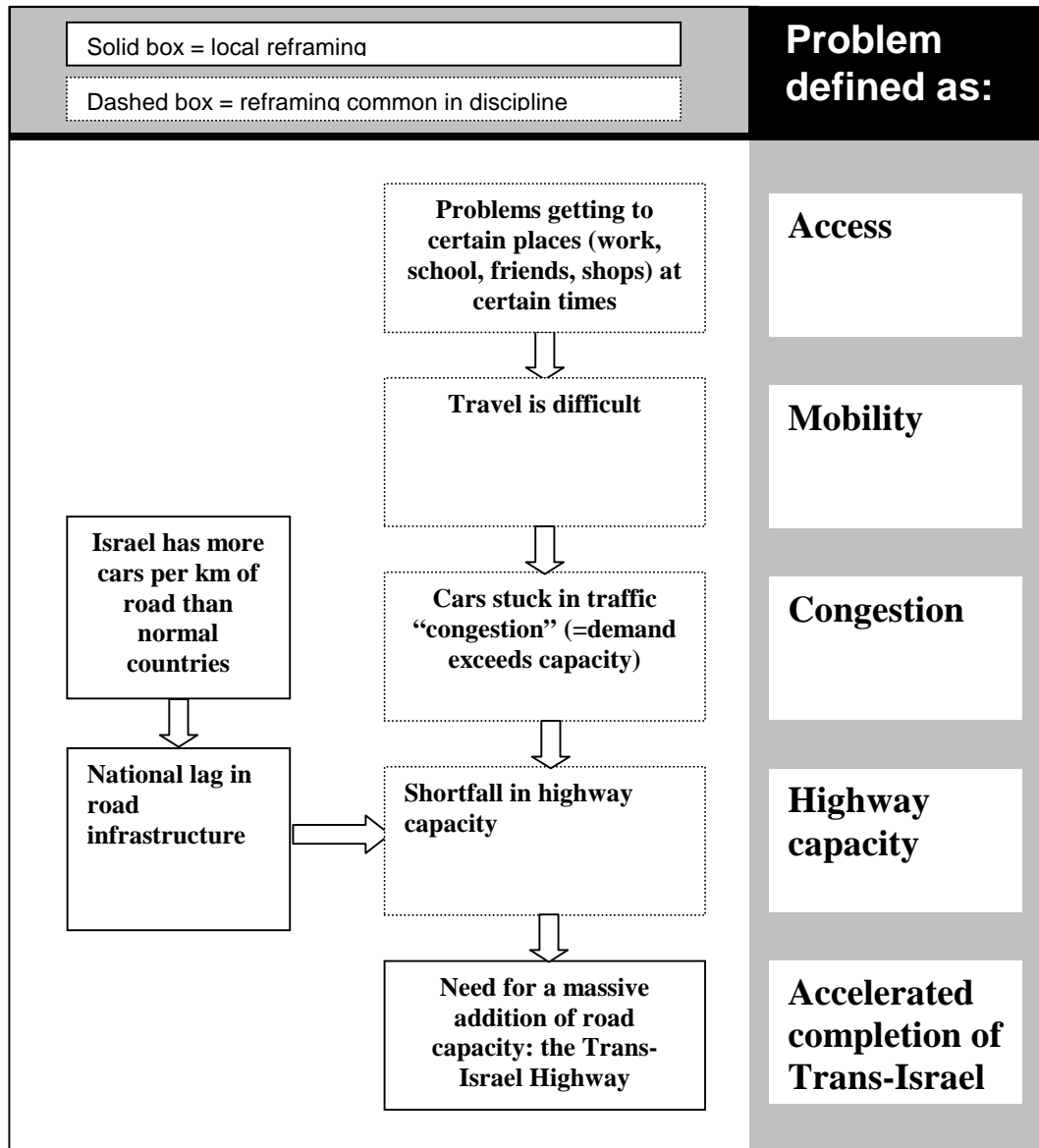
INEVITABILITY THROUGH PROBLEM DEFINITION: CHANNELING DISCONTENT INTO YOUR SOLUTION

Any large project benefits from being cast as an intuitive, inescapable solution to a widely-felt problem. In the case of the Trans-Israel, project proponents furnished a chain of interpretation that provided an easy conceptual slide from difficulties in getting places (a source of wide irritation and concern during the early nineties) into an obvious need for the Highway.

The series of transformations or reframings involved in this slide are portrayed schematically in Fig. 2. Some of these are ready at hand as standard items in the conceptual toolkit of a classical (though increasingly outmoded) paradigm of transport thinking. Others were fashioned specifically in the Israeli context. The construction

of project necessity often combines disciplinary verities with more local inputs in this same way.

Fig. 2: constructing project need: the chain of reframings



While I focus on the specific transformations made for this particular project, a few words are needed about the taken-for-granted paradigms that make the preliminary transformations so smooth as to be almost invisible. One such disciplinary paradigm undergirds the first link in transforming a widely-perceived irritant into an intuitive perception of the project-as-solution. This is a subtle but core shift from an access-based to mobility-based framing of the problem. To elaborate. The mobility-based paradigm has long been foundational to transport planning and engineering, though it has been increasingly challenged over the last decade.⁵ A mobility-based perspective takes what economists term a derived demand (mobility) as its focus. A derived demand is one in which the need for a factor in production derives from the need for the final product this factor helps produce. In this case, it is very seldom movement itself (mobility) that is the desirable, but the final “products” mobility facilitates: i.e. getting to places or things—access.

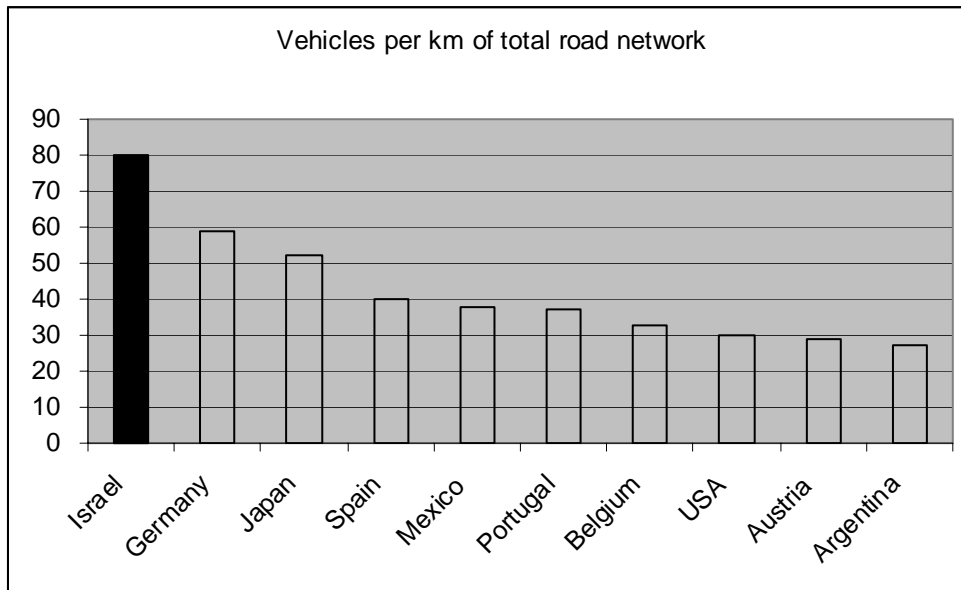
An accessibility-centered approach would thus attend to questions of access—what people travel for, the arrangement and patterns of opportunities and the demand for them in space and time. What do people want, when, and where do these opportunities lie? It is these patterns and arrangements of needs and opportunities that give rise to mobility. A mobility-centered framing, however, places the derived demand, movement itself, at the center of attention. And once moving is the focus, restrictions to mobility become the key problem. Specifically, the restrictions of mobility by other vehicles (congestion) becomes a key transportation issue, and, in what is really an additional separate transformation, this is seen as being due to inadequate road capacity. The intuitive response is ready-at-hand: expanding that capacity.

Resisting the mobility-centered framing would keep the issue as a crisis of access. This would raise quite different questions: where do we have problems getting, and why are these destinations so far away and scattered? Similarly, the framing of congestion as a road capacity problem is not inevitable: the increase of public transport with a dedicated right of way (bus-only lanes or rail corridor) might reduce road capacity but still increase mobility—though not car mobility.

Thus, the first transformations in Figure 2 were based on paradigms that have been common in much of the transport planning/engineering field for decades, and hardly unique to proponents of this particular project. But other interesting transformations were. For example, the transformation of the “congestion” problem into a highway capacity problem was boosted considerably by claims about a comparative “lag” in Israeli road infrastructure—a very precise manipulation of statistics to create and channel a sense of urgency.

This claim about Israel’s lag in road infrastructure was drawn upon by proponents of the Trans-Israel in the critical stages of project lobbying and approval. For example, the graph in Figure 3 was widely used by the Trans-Israel Company in their brochures, presentations to parliamentary committees, to the National Council for Planning and Construction, and in public talks in a wide range of forums.⁶ It was also picked up by newspapers and the annual report of the influential Bank of Israel Research Department. Thus, Israel’s “lag in road infrastructure” became common knowledge in public and professional circles.

Fig. 3: Commonly used graph of Israel’s comparative vehicle density (road infrastructure lag)



To the lay person, this graph indeed shows Israel as having about twice as many cars per kilometer of road than most other “normal” countries, that is, as having half the normal amount of roads. This “lag” was offered as the obvious basis for the urgent need for highway construction, and specifically an argument for the Trans-Israel Highway. The Cross-Israel Highway Company’s official brochure, for example, explained that:⁷

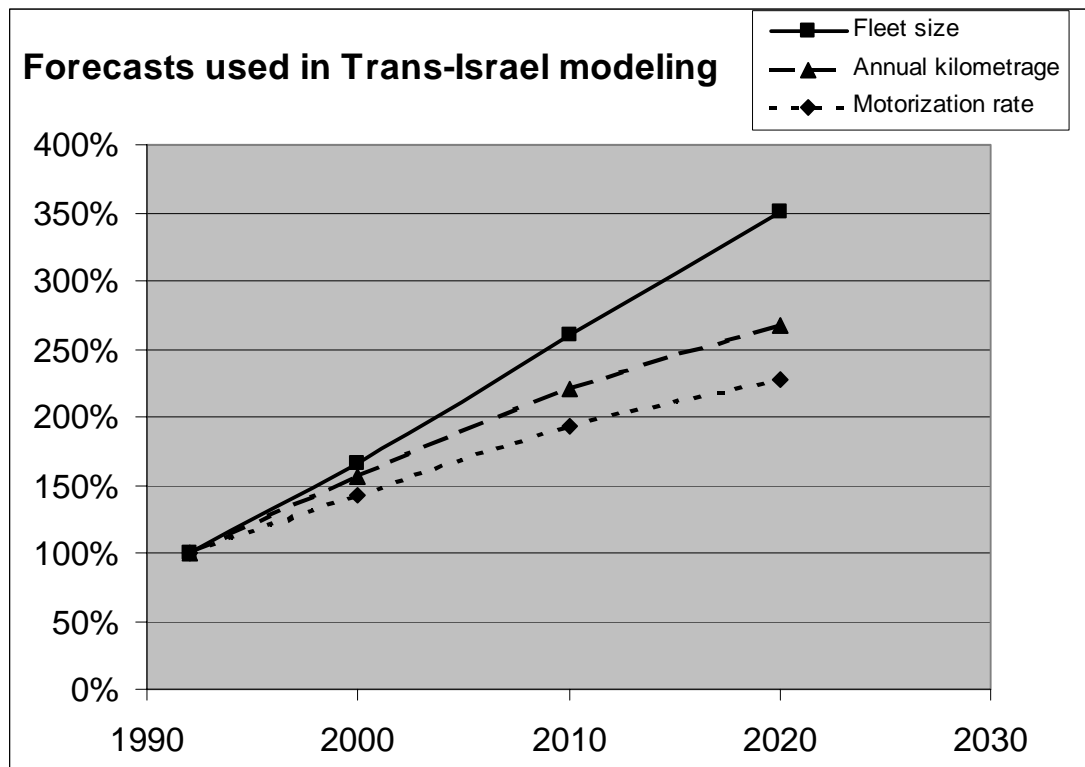
We must also consider. . . congestion (the number of vehicles per kilometer of road). Among Western countries, Israel has some of the worst statistics for vehicle congestion, with 80 cars per kilometer of road, while Germany has only 59, Japan 52, the United States 30, and Argentina 27. If we do not dramatically expand the existing road network, vehicle congestion will reach unbearable levels in the next few years (see table on next page).

Though extensive work is currently underway on roads throughout Israel, this work generally involves either widening existing roads or constructing interchanges, rather than constructing new roads . . . Since the number of vehicles on the road is constantly rising, hundreds of kilometers of road construction is needed to maintain the current density. . . The Cross Israel Highway will solve these and other problems.

Thus, a national-level statistical index (cars per kilometer) is made synonymous with congestion (aided, perhaps, by the fact that the Hebrew words for density and crowding are the same), and Israel’s highways became the most congested in the world.

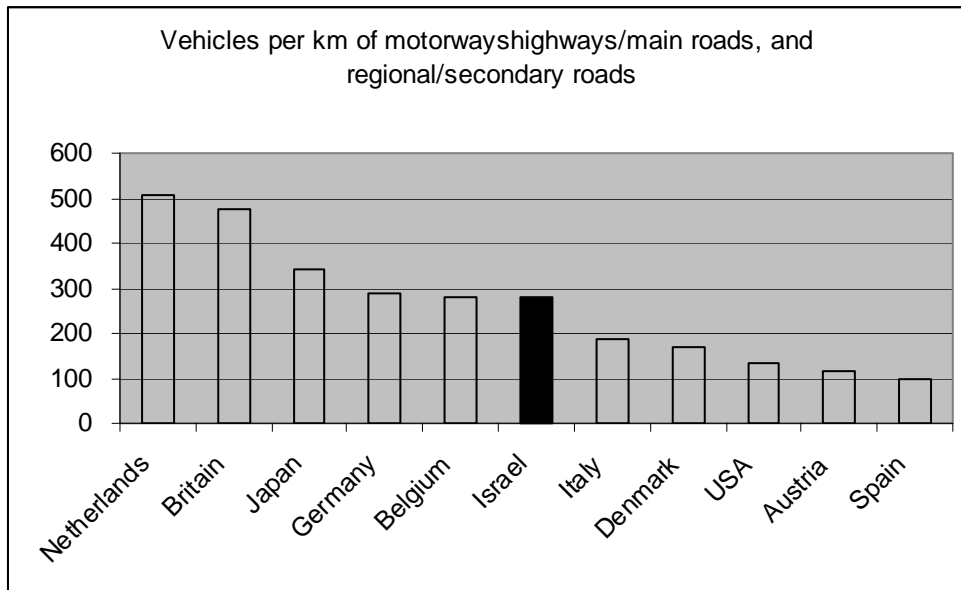
While crudely useful in constructing a need for more highways, the statistic is, on reflection, absurd in its implications, and, in fact, statistically flawed. The graph implies that Israel must double its road length in order to become a “normal” country, with, say, 40 cars per kilometer of road. Even this mammoth task of doubling would only be the beginning, given the anticipated rapid growth in the size of the Israeli fleet. Indeed, the Trans-Israel Highway’s own careful projections, on which the project’s economic viability was based, are shown in Figure 4.⁸ These point to a 350% growth in fleet size by 2020. The logic of this growth coupled with the international comparison of Figure 3 would require that Israel’s road length be extended seven-fold by 2020! Clearly something is wrong here.

Figure 4. Projected car ownership and use as modeled by the Trans-Israel Highway Company



And, indeed, there is. At the crudest level, inappropriate statistics are being used. The Highway Company graph draws on statistics for the entire road network of each country.⁹ This network includes motorways, highways or main roads, secondary or regional roads, as well as the numerous small neighborhood and rural roads. In many countries, the latter category of small roads constitute the bulk of the road system, especially in large countries with extensive rural areas. In the U.S., for example, less than 60% of this entire road network is report as being paved, and in Canada less than 40%, compared to 100% for Israel.¹⁰ A more appropriate basis for comparison as the background for arguing the need for more highways would be a comparison of national figures for vehicle/road ratios on the larger roads, where congestion is a problem. The following graph draws on these more relevant figures hardly poses the same urgent need to overcome Israeli backwardness:¹¹

Figure 5: Israel's comparative road density (road infrastructure lag), using relevant statistics

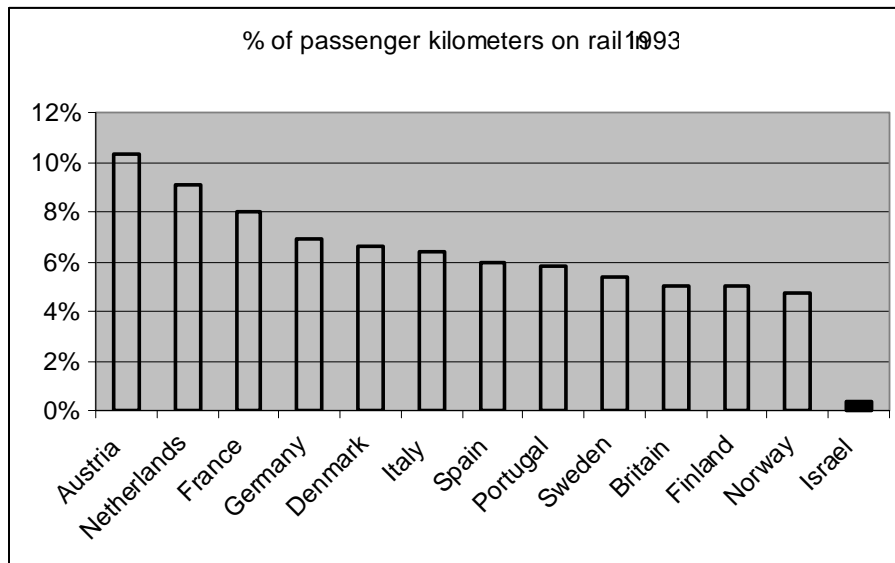


Comparing the extent of Israel's roads (without including neighborhood and rural roads) we see that while Israel has more cars for each kilometer of motorways, highways/main, and regional/secondary roads than the U.S., it has a lower ratio than many other countries. Importantly, using this indicator of road "crowding," Israel is significantly better off than The Netherlands, and almost identical to Belgium (two countries whose area and population density are closer to Israel's). These countries—which have far less road length for each car than Israel—are not usually thought of as infrastructure poor in international perspective.

This manipulation of statistics is only an extreme case of a tendency: project proponents will choose a problem definition that points to their project as a solution. Project inevitability is boosted by being built-in to the perception of the objective situation.

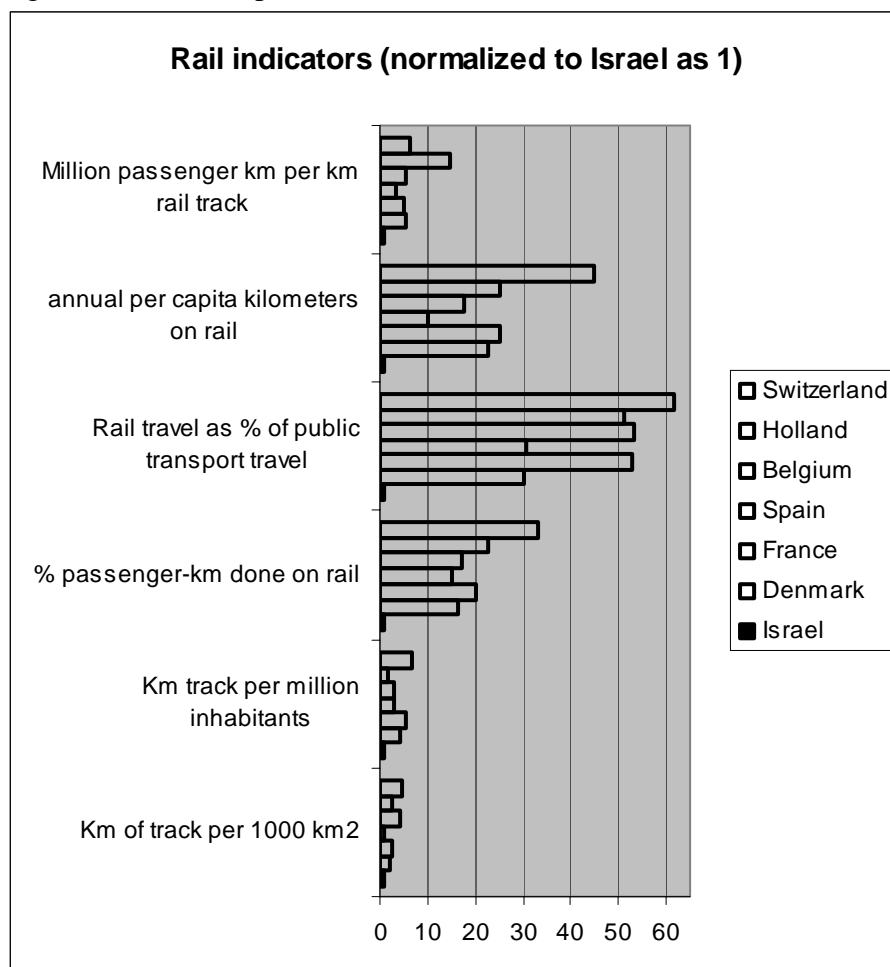
The crisis could have been constructed in ways that pointed to other solutions. The familiar experience of crawling along in traffic jams could have been conceptually linked to other lags or deficits. To take one example, rail proponents might have linked the experience of congestion to a drastic lag in rail infrastructure. Here the statistics are more solid, and far more striking. For example, Figure 6 presents statistics from that same period as the road statistics used by the Highway Company and shows that Israel lags strikingly in terms of portion of travel done by rail.

Fig. 6: Comparative rail use in European countries



Similarly, the following graphs are derived from comparative statistics for the same year. (Interestingly these were compiled by the same consultancy hired by the Cross-Israel Highway Company to prepare its feasibility studies, but not for the Cross-Israel Company.)

Fig. 7: Various comparative rail indicators (1993)



These comparative statistics show the dramatically low comparative presence, use, and productivity of Israeli rail. These lags are even more pronounced given that the high population and housing densities in Israel are supportive of rail-based transport. And, interestingly, this report also goes on to show that while the level of Israel's investment in roads during this period was comparable to those of these European countries, its investment in rail was about one seventh (and this is a conservative estimate of the lag, given that it excludes Europe's heavy investment in urban rail and its private sector rail investment). An infrastructure lag indeed. One could imagine rail proponents using such statistics to structure the need as being urgent upgrading and extension of rail lines and service to provide an alternative to (if not relieve) the rush-hour jams into and from city centers.

One could query the comparability of these statistics (how do the country and population sizes effect the competitiveness of rail, how much of the track is urban vs. interurban, etc.)—though these discrepancies are probably subtle compared to the misleading use of highway statistics just dismissed. But the point here is not to engage in a transport debate—especially not the caricatured rail-versus-highway debate that sometimes surrounded the Trans-Israel Highway. Rather, I bring these very different constructions of Israel's "infrastructure lag" as an illustration of the first mechanism of boosting project inevitability: the framing of transport situations and needs in a way that points to a particular kind of solution project—which its proponents happen to offer.

This framing of need was perhaps too useful to abandon, even in the face of conflicting evidence. Thus, the critical analysis above was published in April of 1997,¹² and a copy made available to the company's Director General, the Chairman of the Board, and others. Six months later, however, the same claims appear even more forcefully on the cover of the road map (including the Trans-Israel), distributed for the New Year in 1997 to hundred of thousands of readers of the country's largest daily newspaper.

Currently, Israel's interurban road network is extremely retarded in its extent, and the density on the roads is intolerable. While other countries in Europe have, on average, only 40 vehicles per kilometer of road, in Israel there are about 90! And this, despite the fact that the number of vehicles there, relative to the size of the population, is twice as large as here!

Only the Trans-Israel Highway can significantly ease this terrible density/congestion (which is rising and rising at the stunning rate of 7% a year!) And bring the traffic conditions in Israel closer to those prevailing in advanced countries in the world.

INEVITABILITY THROUGH THE PAST: REWRITING ONE'S HISTORY AS NATURAL UNFOLDING

A project's story of origin and development is critical for the creation of its inevitability. The more sure-footed a scheme's emergence, the more natural its apparent unfolding as a solution that was meant-to-be, the better seated it is in the present.

Yet the development of many schemes is halting, full of dead ends, struggles, unexpected turns and compromises. A canonical story of the past does well to avoid these messy parts of history. At best, they clutter a narrative of heroic accomplishment, and at worst threaten to unravel a project's hard-won inevitability in the present. Such wrong turns, close calls, loose ends, and haphazard outcomes remind us that things could have turned out differently; rejected options are disconcerting emissaries from a time prior to the project's overwhelming colonization of the space of alternatives; evidence of strenuous battles by particular people to forward the project uncomfortably suggest that power, not just intrinsic superiority, contributed to its growing realness and authority.

I have found it useful to look at the retroactive canonization of a large project's origin using perspectives developed by some sociologists and sociologically-minded historians of science and technology.¹³ This approach, sometimes termed "science studies," examines, among other things, the processes through which a technology is widely adopted or through which a theoretical scientific proposition becomes true.¹⁴ From what is now an extensive and sophisticated body of work, let me sketch three terms that illuminate key elements of this approach that will help our analysis: a constructionist heuristic (or symmetry principle); Whig history; and closure. These concepts can help us understand how the story about the development of the Trans-Israel told by its proponents helps to bolster the project's inevitability.

A **constructionist heuristic** (and the related symmetry principle) for examining a scientific claim or technology attempts to see its truth or success as a result of—not reason for—its stabilization and broad acceptance. (Symmetry refers to the call to sociologists of scientific knowledge to treat claims by disputants in a scientific controversy symmetrically: without respect to whether they are now perceived as true or false, rational or not, successful or failed).¹⁵ This heuristic is a conscious effort to underscore the social dimensions of techno-scientific change by bracketing the surety of hindsight. If we view the emergence of a theory/technology we now "know" as true/superior as a function of its truth/superiority then we miss much of the sociological dimension of the story. From this perspective, the primary dynamic of advancement of a theory/technology is the widening recognition of its virtues. During the debate, however, the participants did not know how things would turn out—what in the end would be true or better. Therefore, the easy answers of a truth-based account ("it spread because it was true") will rob us of insight into the social (and perhaps accidental) reasons for why things turned out as they did—even if truth did have something to do with it.¹⁶ And, given the constant evolution of knowledge, a historical account based on current understandings also runs the risk of becoming obsolete: after all, it would be miraculously lucky that we happened to be born in the generation that finally got it right!

A constructionist heuristic is an antidote to the tendency to tell a **Whig history**--an account of past events from the perspective of the present. Whig history sees the past as “designed” to produce the current state of affairs. Thus, current truths and understandings of what is the best arrangement (of social life, technology, etc.) implicitly shape the narrative about past processes. Tendencies or events that can be seen as harbingers of the present are favored in such a narrative. Conversely, the many possibilities that existed in each moment become subdued; social and personal struggle becomes, at most, colorful anecdote at the edges of the real story of how truth prevailed—more or less inevitably—over error (or more effective technologies over inferior ones). Thus, history becomes the celebratory chronicle of the emergence of the present state of affairs, a story told by the winners. I sometimes will refer to such histories as canonical stories, in reference to the process by which the body of defined and accepted texts (especially religious texts) is stabilized, to the exclusion of others.

Useful things happen when we examine the past with a lens that resists the tendency to Whig history. When we adopt a constructionist heuristic to bracket our current knowledge of what is true and best, the perspective of participants at every moment along the way becomes more compelling; and, as current conceptions become less dominant, we have to look more carefully at the heterogeneous web of resources that were used to forward propositions and technologies. This is where the third concept, the notion of **closure**, comes in. For participants, the forwarding (or defeat) of their projects is/was usually a fierce battle to persuade, discredit, and above all to harness enough resources (people, documents, money, equipment) to stabilize one’s project and ensure that the cost of maintaining alternatives becomes too high to for opponents to sustain. Closure is the moment when enough resources have been linked to the project for it to become stable: the cost of overturning it is more than any of the objectors can muster. The winning project (or theory) comes to occupy the full space of possibility, alternatives become unthinkable, and all "serious" argument is now conducted inside the project’s “box.” As we move forward in time, away from the moment of closure, the stories about what preceded this moment tend to become increasingly canonical.

Drawing on these concepts, we can analyze the inevitability built by and into the history of a project’s evolution. Take the following fairly typical story of the Trans-Israel Highway’s emergence, as told by the Company’s Chief Engineer at a public conference.¹⁷

Route number 6—which over time came to be called “The Trans-Israel Highway”—first appears in a formal manner on planning maps in 1976 as an organic part of the National Outline Plan for Roads, NOP3. . . .

The planning team saw in it, even in this first stage, a highway, at the highest level of the road hierarchy. . . with all connections to it as multi-level interchanges.

NOP3, as with all National Outline Plans, passed the evaluation of the various levels of planning institutions, until its approval by the assembly of the National Council for Planning and Construction, and subsequently received approval from the Government of Israel. . .

In the years 1988-92, as a consequence of a combination of circumstances. . . there was a renewed interest in the project, and its frameworks and goals were determined substantively. Initially the Ministry of Construction and Housing through the agency of the Public Works Department conducted an evaluation of the need for investment in roads in the central region, in which the need, necessity, and worthwhilness of constructing the central portion of Route 6 stood out clearly.

Following this, a wide-ranging research was initiated, which included a traffic analysis of unprecedented scope, and an examination of transport, economic, environmental and other [aspects].

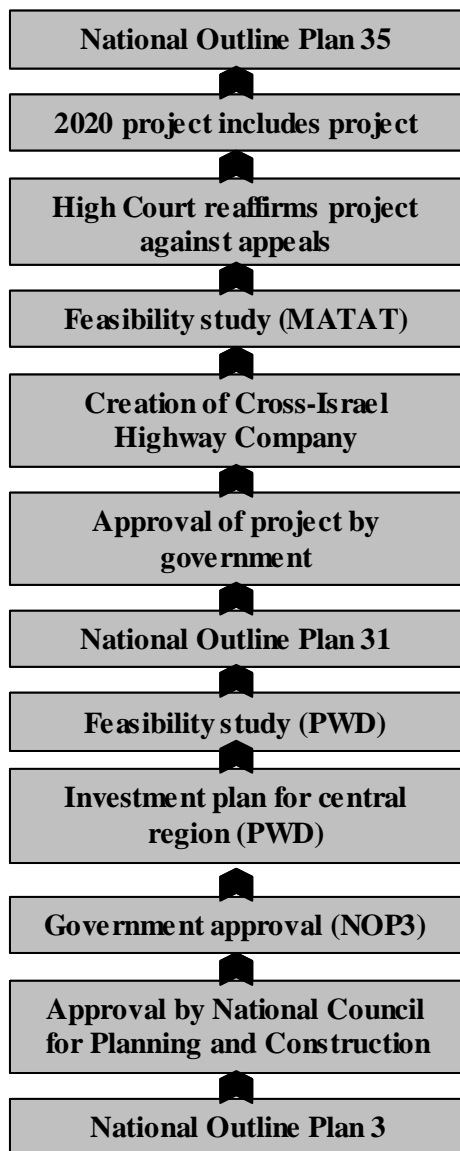
1990 brought the first waves of immigration from the Soviet Union and [the preparation of the National Outline Plan. . .] NOP31. This plan evaluated, of course, all aspects of development, and reached the conclusion that one of the areas demanding accelerated advancement was the realm of infrastructure. In the words of the plan's editors: "a preference for investments in infrastructure. . . ; the creation of conditions for realizing the policy of population dispersal through investments in the development of infrastructure. . . A positive 'A' priority coefficient—[i.e.] high priority—[for] development of engineering infrastructure in general, and in particular transport and the road system. . . .National projects in the realm of transportation--the construction of Route No 6 in the section between Beer Sheva and Kabri. . . '

From here the distance was short to the project's approval by the Government of Israel. . . During the same year the Government of Israel determined that the project should be given national priority, and toward this end a special framework also be created that would be responsible for the project's implementation: The Trans-Israel Highway Company.

The NOP31 framework extended the limits of Route 6 south. . . and north. . . Thus the vision was realized fully, in a 300 kilometer extent.

This (and many other similar accounts by the Highway Company) give an orderly canonical account of the Highway's evolution. Schematically, the typically narrated progression of milestones (up to the point where the project was tendered and a winning company chosen), goes something like this.

Fig. 8: a canonical account of the approval of the trans-Israel Highway



An account like this is formally correct, in that each of these milestones did occur, and, taken together, they do seem to support a picture of a project carried forward by standard (impeccable) sequence of evaluation and statutory approval. I will adopt two strategies for challenging the coherence of this canonical account: (1) opening up the “black box” of each of these milestones (appearing in **bold** in the following paragraphs), and (2) sketching an alternative possible account of the project’s evolution, one with somewhat different narrative features.

Let’s begin with the founding milestone in this sequence, **National Outline Plan 3** (the plan for roads) published in 1986.¹⁸ Route 6 (which later evolved into the Trans-Israel) was first included in this plan as a pencil line on a map of 1:100,000 scale to preserve a future right-of-way.¹⁹ However, this plan (and other Outline Plans) also included many things that were not and never will be built, so mere existence in this plan is not itself some divine promise that must inevitably come to be; nor is absence from the original plan a bar to a project.

Or take the “**Investment Plan for the Central Region**,” released by the Israel Institute for Transport Planning and Research for the Public Works Department in 1990, invoked as an early planning source demonstrating the need for the project. This plan does, indeed, include Route 6: a 75 kilometer road of 2-3 lanes in each direction, with an estimated cost of \$100-150 million (200-300 million shekel in 1989 terms). However, the Route 6 that appears in the recommended scenario of this report, is relatively modest, comprising the eastern section of a middle and outer ring road for the Tel Aviv metropolitan area, with little land-use development around it. The Road 6 that was in fact advanced as the Trans-Israel Highway, on the other hand, corresponds to the highway in the scenario rejected in this Investment Plan (p. 53-54): namely the scenario in which Route 6 is central, has 4 lanes in each direction, and significant development around it.²⁰

The Trans-Israel’s planning diverges from the Investment Plan’s assumptions in other ways. For example, the plan assumes “massive development of the public transport system—commuter rail and light rail,” (p. 12), whereas the feasibility study commissioned by the Cross-Israel Highway company projected that “public transportation in Israel is not expected to undergo significant changes before the year 2010 at least” with no light rail scheduled within the 30 years of the analysis period.²¹

Thus, while the 300 km \$1.5 billion project now called the Trans-Israel Highway carries the same route number as the ring road segment of the Investment Plan, its pedigree is less direct and more troubled than this canonical narrative suggests.

Moving along in the story, the validity as a milestone of the January 1991 **PWD feasibility study**, mentioned in the Chief Engineer’s speech, also comes apart under inspection. Besides the fact that it seems to have developed the rejected scenario of the Investment Plan (i.e. emphasizing development along the highway, a much longer road, more lanes, etc.), it was plagued by technical issues to the point of rejection. For example, the modeling showed the road network with Route 6 coming to a complete standstill in 2020, and an arbitrary reduction of the projections by 20% only boosted the average network speed to 20 km/hour (4 km/hour faster than in the absence of Route 6). There were many other problems, and after submitting their modeling report, the consulting company subcontracted to perform this study then published a report (at its own expense) in 1992, in which they ran the feasibility study with their own parameters, rather than the irregular ones they were commissioned to use.²² The remodeling gave substantially different results, and after the Cross-Israel Highway was formed in 1993, it chose to conduct an entirely new feasibility study for the project, thus essentially discarding the products of this “milestone” they include in their genealogy.

Though it later proved to be quite shaky, the PWD feasibility study was an important basis for the Highway’s inclusion in the next “milestone” in this narrative, **National Outline Plan 31 (TAMA31 or NOP31)** of December 1991. But while included in this comprehensive national plan done in the wake of massive immigration from the former Soviet Union, the project seems to be detached from or even at odds with some of this document's central stated national and regional goals. NOP31's strategic development principles for the central area repeatedly warn against sprawl, especially close to the Tel-Aviv Metropolitan area (this area was seen as

subject to tremendous development pressures and the conversion of agricultural areas to other land uses spurred by the crisis in agriculture.)²³ The document urged that this suburbanization be stemmed through encouraging self-contained medium density settlements that would reduce commuting to Tel Aviv and which could be viably served by public transport.²⁴ In order to break out of the vicious circle it saw emerging—in which rising motorization leads to a deterioration of public transport, giving rise to further car use—NOP31 repeated the policy statements of the Ministry of Transport from 1975 on the restraint of private car use,²⁵ and reaffirmed the need for fiscal and other measures to accomplish this. The master plan explicitly argues that Israel's highest transportation priority is a massive and immediate investment in public transport even if this initially harms the level of service to private cars.²⁶ In addition to laying out this general orientation on the role of transport in achieving the country's planning goals, TAMA 31 made a number of specific suggestions, such as the creation of dedicated bus lanes, the expansion of rail service, and the formation of a supra-jurisdictional body to accelerate the improvement of the public transport system.

In a canonical narrative, a project's inclusion in a planning milestone is naturally read as demonstrating its compatibility with, vindication by, and necessity within the milestone. A deconstruction of the canon might show a more tenuous relation, at least in the case of the Trans-Israel in NOP31. It is difficult to understand how NOP31's portrait of Israel's pressing transport needs—its warnings and proposals—can be reconciled with the Highway's anticipated impacts. Perhaps such compatibility might have been hoped for at the time of the inclusion, when a set of allied transport and land-use measures was urged. But there is little evidence to suggest that these projects were ever thought of as bundled in any way. And increasing hindsight—with the recommended land use and public transport measures having progressed fitfully, if at all, while the Trans-Israel moved rapidly forward—only heightens the sense of divergence between NOP31 and the Highway.

The **MATAT** (a transport consultancy) **feasibility study** demonstrating overwhelming economic benefit of the project to the Israeli economy is the next milestone in the narrative. As I have shown elsewhere, this study was conceptually and technically flawed.²⁷ It used strikingly generous parameters (for example, a highly irregular discount rate that inflated project value by 50 billion shekel), and used modeling and assessment methods that were too crude for a project of this scope (ignoring induced traffic and the regional, cumulative, and land-use implications of the project).

The absence of an integrated evaluation of the project was the basis of the high Court of Justice Appeal by the Israel Union for Environmental Defense (IUED). The **rejection of the High Court appeal** is cited often by the Cross-Israel Company as another landmark, framed as a further vindication of the project by the supreme legal authority. In fact, the High Court was careful to state that it was in no way was it intending or capable of commenting on the substance of the IUED call for a comprehensive environmental impact assessment (EIA) of the project.²⁸ The Court's decision was to affirm that the project had followed existing EIA requirements, which, indeed, allowed a local assessment only of some selected sections of the road to be considered an EIA. But though the court's decision was justified within the rudimentary development of Israeli environmental assessment procedures and law,

experts pointed out that this lack of comprehensive evaluation ran contrary to the standards and procedures of many developed countries, and the U.S. in particular.²⁹ And in any event, the dismissal was procedural, not a substantive affirmation of the project.

The next milestones invoked are the project's inclusion in the **2020 strategic planning document** for Israel and **National Outline Plan 35** (NOP35). Yet if we open these boxes, the picture is—once again—more equivocal. Thus, in their September 1996 report on urban transport,³⁰ the transportation team of the 2020 Plan warned that the development of the Trans-Israel Highway could prove a blessing or a curse, depending on a number of factors. These included the land uses around it, the provision of high quality public transport to the region (including rail solutions along and perpendicular to the road), the creation of employment centers that form strong independent foci, rather than sprawl, and the development of lateral connecting roads. Without strong government policies in these areas, claimed the 2020 report, there would be a danger that the Highway will encourage California-style low-density bedroom communities along its path, devour open space, deepen car-dependency and worsen congestion. "For this reason," conclude the authors, "the decision of whether and how to construct the Highway must be based on general development policy considerations." Thus, the narrative does not run as cleanly through this milestone as we are led to believe. Similarly, the director of the NOP35 project has stated publicly on more than one occasion that the Trans-Israel is included in this Outline Plan as an inherited project, but that if it were up to him, the Highway should not be part of the plan.

In short, while formally more or less correct, the Chief Engineer's narrative hides important dynamics of the project's progress. After-the-fact, the author is able to legitimately string together events and milestones that create a smooth history of the inevitable unfolding, from an initial far-sighted "vision" to its well-evaluated and integrated "realization." However, there are messier circumstances underneath this smooth surface, as highlighted in Table 1. An outsider encountering the canonical account—and the passage of time is progressively making almost everybody outsiders—has no access to the struggle, accident, and flux in the events from which a post-hoc description was abstracted.

Table 1. The effects produced by a project’s canonical history

Effect	The canonical origin story portrays:	Whereas in fact:
Project plan-directed	the project as having originated as a considered response to perceived planning needs	it grew rather haphazardly through mutation and adaptation of a variety of existing elements and motivations, many of which were unconsidered or even quirky in rational planning terms. The declared purpose of the project shifts over time.
Project unitary and stable	the project as a consistent stable entity throughout. In the limit case, the entire project was present in potential in the initial concept.	it changed form, scope, and intention over time— i.e. to some extent the same name refers to projects that are substantially different at different points in time
Project inert; proponents invisible	the project as having been passively borne forward by an endorsing bureaucracy by virtue of its self-evident merits.	it was forwarded through tremendous active efforts by interested parties to enlist support, and push the project through an inert if not resistant bureaucracy
Project integrated	the project as driven by, and integrated with, national planning directives	it is partly at odds with national planning directives; integrated with planning directives as part of a package, other elements of which have fallen away; over time; national directives are changed to reflect the existence of the project as accomplished fact
Project optimal	the project as having been the unequivocal best choice among alternatives	it was often not systematically compared with alternatives; at times the project was the second-best option in evaluations, or one which would perform well only when bundled with other measures, which have since dropped away
Milestones as black boxes	milestones as series of unequivocal stepping stones directed toward the final product	it is only after the fact that events or invocations of the project can be regarded as having a directionality, or can have their qualification or context dropped so as to appear as marking unequivocal endorsement of the project
Expansion as natural	Overruns and expansions are invisible or cast as effortless natural entailments of the original	Achieved through forceful a “ratcheting-up” of the project’s scope

An account that was truer to the more messy, haphazard, and embattled history of the project’s advancement might trace how one wild idea (a line on a 1:100,000 map) is picked up in one way and then another by various interested parties: as an outer ring road, as a way to connect Israel’s periphery, and as a backbone for the “Stars project” (This was a geo-strategically motivated notion of a group of towns along the Green Line east of Tel Aviv, forwarded by Ariel Sharon when he became Minister of Housing. This program would Judaize the Triangle area, which had a dominantly Arab population with close cultural ties to the West Bank Palestinians, and simultaneously protect and blur the boundary with the occupied West Bank.)

Such a history might show how, at some point, this medley of motivations was sufficient to pass the threshold of formalization and organizational backing that enabled it to become a self-sustaining enterprise. Various actors (a senior public official looking for a way to jump beyond the salary scale possible in the Public Works Department; a retiring Chief-of-Staff needing a substantial position in civilian life; a Finance Minister frustrated with slow progress on past road projects) were keen to have the project pulled out of the Public Works Department, responsible for construction of all other inter-urban roads, and so a separate company devoted to the

Highway was formed. This company, with its independent assured operating budget, and a select and well-paid staff could really move the project forward.

Despite their own studies recommending public sector financing arrangement for the road, an international private-sector Build-Operate-Transfer (BOT) financing scheme was developed for the project. Public sector financing would leave the project forever at the mercy of annual budgeting, where it would continually be weighed against the other pressing budgetary needs of the country. The project also offered the Ministry of Finance, eager to establish a precedent for private sector involvement in infrastructure, a flagship project. An international BOT tender raised the stakes and mass of this project considerably. This was no longer one road within an overall system, or something that could be achieved incrementally, but a country-long, multi-laned billion plus dollar project. Why have a separate company, or invite international bids for anything less?

An alternative history would also show the ways in which the Highway grew through the kind of accretionary processes described above. And how through the energy of its advocates it assumed a degree of accomplished “facticity,” and proportions that began to shape national planning—rather than be a response to its directives. The ability to reverse the appearance of the directionality of this causation, and the various other effects of rewriting history detailed in Table 1, together constitute a powerful means for creating (the appearance of) inevitability.

Inevitability through limiting discussion to the project “box”

Project proponents love “how” questions. They hate “if” questions; and even “when” questions make them queasy. We can look at the years of controversy around the Trans-Israel as a battle by proponents to move to the “how” as quickly as possible, and by the opponents to resist this premature closure, to keep the big “if” questions open as long as possible.

Once central project debates begin to revolve around internal questions such as “should the road run East or West of *Beit Nehemya?*,” or “should we have acoustic barriers,” the battle is won (or, from the perspective of opponents, lost). Similarly, questions about local impacts (on groundwater, on archaeological sites), while annoying, are not mortal. In fact, while rerouting or impact reduction measures are costly and controversial, they basically reaffirm the project at a most basic level: it is going to happen. It is only the questions outside the project box, or impacts so large, diffuse and cumulative as to question the box itself that are strategic threats, and thus truly worrying to project proponents.

For example, some of the “out of the box” questions that would have truly threatened the project are the following.

- Israel does not yet have an approved transport master plan. The right-of-way for a highway is statutorily preserved, and not going away. Wouldn't it make sense, therefore, to accelerate the completion of this comprehensive transport master plan, and see if and how the proposed highway played a role in this.
- A variety of demand management and public transport measures have been widely endorsed for a long time. If these were to be introduced, would the Highway still be necessary?
- Should the highway be bundled (in a binding way, through budgets, timetables and conditionality clauses) with synergistic land use and transport measures?
- Do other transport measures have higher value and urgency? For example, the widening and improvement of existing roads and interchanges, and proposals for rail and dedicated bus lanes to facilitate radial rush hour commuting. What should the staging of these be with respect to the Highway?
- What are the likely long-term, cumulative, regional impacts of the project: on land-use, other transport modes, on car dependency, on commuting patterns, etc.

These are the kind of doubts that project proponents do not want floating around, even as notions, and certainly not as well developed alternatives.

Many challenges to the project revolved precisely around these kind of heretical box-questioning issues. Thus, the Israel Union for Environmental Defense's call for a comprehensive EIS, the Ministry of Environment's call for a special “Regional Structure Plan” for the highway corridor, and Sadan and Lowenthal's analysis of the “Trans-Israel Highway as suburb-generator” all raised the specter of impacts large and fundamental enough to potentially unsettle the very existence of project. Similarly, the DESHE forum of the Society for Protection of Nature in Israel called for a reconsideration by the National Council for Planning and Construction of alternatives to the project, and for suspending the project until completion of a

national transport master plan; the Ministers Beilin and Sarid brought a vote to the Cabinet about reconsidering the project, as did a Bill to Parliament by the MK Uzi Landau, and a petition signed by a full 59 of Israel's 120 Parliament (Knesset) members. My own comprehensive study of the project's planning and evaluation embodied its conclusion in its title, "The Trans-Israel Highway: Do We Know Enough to Proceed," arguing, among other things, that the scope of consideration was narrowing prematurely onto a single project.

The question of whether to fight for cancellation of the project or only to try and reduce its damages was a issue that divided the organization of inhabitants along the right-of-way from the green NGOs. While many in the inhabitants group opposed the project in principle, the organization's leadership sensed that the project's momentum was too large to overturn, and they adopted an official stance of "only saying 'no' when they could offer a 'yes' (a positive alternative)".³¹ Since they were not prepared to develop an alternative for the project as a whole, their policy was to propose adjustments to the details of the project in a way that would "minimize damages and maximize returns." Thus, they fought to relocate the road (mostly eastward) away from their houses, to gain fair compensation (and especially alternative land rather than a cash payout), and to ensure acoustic protection. In this, they parted ways with much grass roots and NGO activism, which began with an exclusive call for project cancellation.

As irreversible steps started to solidify the project's status in 1994 and 1995 (the planning approval of sections of the highway, the passage of special laws for land appropriation and tolling, the preparation and issuance of an international tender for the project), the prospect for a general reconsideration of the project began to seem more quixotic, or, at least to demand more heroic and higher levels of leadership in order to go against this gathering momentum. In a January 1996 letter, a personal friend of Shimon Peres, then Prime Minister and Defense Minister, pled with him:³²

The trans-Israel Highway is a grave mistake, but we can still stop and think again. . . Leadership is also the strength to stop a mistaken process. . . There are other solutions. Give an opportunity for new and more humane thinking before an act is finally made that will change this country and is appearance from one pole to another.

As the likelihood of the project became higher, there was a real debate in the NGO community: some felt that fighting for reduced impacts would constitute a surrender on the question of "if"; others that not doing so would result in a worse highway if and when it did get built. While the larger green organizations quietly began arguing about the "how," even while maintaining a *pro-forma* rejection of the entire project, the more radical NGOs remained firmly rejectionist even after construction had actually begun.³³

Whether a project box is being closed "too early," is, of course, to some extent a judgment call. There is extensive debate in the planning literature on whether comprehensive rational planning—defining objectives and then assembling and comparing a range of options for meeting them—can or does occur in the real world. Critics point to more incremental and pragmatic approaches, where the issue at stake

is not the universe of conceivable projects, and more often resolves to the approval or rejection of a single project. We can, therefore, expect a tension about whether a particular project emerged from a sufficiently broad range of options and in a sufficiently deliberative manner. Project opponents can legitimately ask: were goals specified? are they correct? what would measures of their achievement be and to what extent does the project achieve them? was a full range of options considered (both on the supply and demand side, and including bundles of measures)? At the same time, project proponents can legitimately tire of debate that invokes the potentially endless “what ifs” of designing a perfect world, and just want to get on with it. Within this field of tension, proponents will push for closure, in order to reduce debate to within the project box as soon as possible, and develop rhetorical and political moves to achieve this. Opponents will struggle to keep “the big questions” alive.

The Trans-Israel proponents were particularly effective in squelching such inevitability-undermining “big questions” fairly early on. Because the project did not emerge from an overall consideration of transport/development needs, it entered public policy discussion in a fairly full blown form. The two feasibility studies commissioned in 1991 by Public Works Department (MA'ATZ, which is responsible for interurban roads), and then in 1995 by the Cross-Israel Highway Company, were more demonstrations of the worth of a project that had been chosen, than tools for deciding among projects. As a result, the forums entrusted with approving or rejecting projects were confronted with a highly specific and elaborated proposal, including intimidating and precise calculations of the costs to the country of any delay.

One can sense a measure of the discomfort of some decision makers with the situation of a box prematurely sealed in the words of the late Member of Knesset, Ariel Weinstein, recorded in the protocol of the Parliament (Knesset) Finance Committee discussion of the Highway on August 8, 1994, prior to the approval of the Trans-Israel Highway Law. After repeated unsuccessful attempts to discover the existence of any governmental alternatives to the proposed Highway, this Knesset member made clear the unsatisfactory circumstances in which he was forced to give his approval of the project.³⁴

I think it's a good thing that the meeting opened with a general hearing of the issues. I expected to come here and hear alternatives. Alternatives are a document opposite a document, that we can have some struggle of ideas, that one person will say he thinks we need a road, and another will say he thinks we need rail. To my sorrow this didn't happen. We didn't get any alternatives here. We have the road and they say: this is what is before you. If there was an alternative here we could have had a discussion and turned to the government to develop this second alternative. It is not we that have to think of alternatives, we can raise questions if alternatives are available, but we have no tools to think of alternatives, only to be judges, and we can't be judges if there is no alternative. I have, as I said, an intuition, that this project is needed. On the other hand I fear that when this business is finished the road and entrances to it will be swamped with vehicles. So what is the alternative I have before me as

a member of the Committee. I can demand that they abandon the road until we get some alternative, a different document. Another document will hold the story up for 5 years, and I can't come and say that. Therefore I think we have no choice. I think it's a scandal that there isn't an alternative and I say this to the generations of Governments, and to the generations of Transport Ministries, who didn't come to us with another document against these pretty documents here. I can't take it upon myself to postpone the discussion for 5 or 10 years, and I think therefore that we have no choice but to enter into this business, with all the protest and scandal of it.

How do project proponents respond to awkward out-of-the-box queries that threaten to undermine project inevitability by shifting the ground from “how” to “if?” In reviewing extensive materials relating to the Trans-Israel controversy, I found repeated patterns of dismissal of these questions. Table 2 organizes these into an initial taxonomy.

Table 2: Methods for dismissing “out-of-the-box” discussion

METHOD OF DISMISSAL		The project box is all that is relevant because. . .	Items outside the box are . . .	People who talk about the items outside are. . .
HISTORY		The project has already been approved, and is now simply being executed	Closed issues; history	Out of touch. Living in the past.
REASONED REJECTION AND ITS VARIANTS	LEGITIMATE REJECTION	Other options were rejected after careful consideration.	Infeasible. Dismissed for good reason	(1) unaware of evaluations already done; (2) fantasizing about the potential of dismissed alternatives (3) have exotic or unreasonable priorities.
	DISCIPLINARY NARROWING	This is an “X” issue, and all well-trained professional “Xologists” say that this is the range of choices. (Those who don’t aren’t professionals).	Ignorant questions raised by outsiders or marginal professionals	If not professionals: ignorant lay-people; If professional non-Xologists: Trying to transfer their expert standing into a realm they know nothing about If Xologists: marginal Xologists
	THE PROJECT AS BENCHMARK	All other projects are considered as single replacements of this project (rather than as elements of a package that best meet our most pressing needs)	Inferior substitutes; sensitivity tests only show the robustness of the chosen project	Caught up in an unrealistic sense of the potential of alternatives, which can never replace the project’s functions.
INCREMENTALIST PRAGMATISM		It is fruitless and wasteful to study the many and hugely uncertain potential alternatives. We need study only the choices necessary to decide on the next reasonable incremental step.	Irrelevant.	(1) Hold some outmoded vision of the possibility of comprehensive planning. (2) Using a call for comprehensive analysis to hold up the project.
MINDING OUR OWN BUSINESS		Subsidiary issues not the responsibility of project planners.	Are/should be addressed in another forum.	Unreasonably trying to make this project responsible for realms that are not its responsibility.

To illustrate some of these modes of dismissal (designated in bold below), take, for example, the rather straight-forward response of the Minister of Construction and Housing to a letter from the CEO and the Director of the Board of the Society for the Protection of Nature in Israel (SPNI), the country’s largest NGO calling to “stop and

reexamine the Trans-Israel Highway.” The Minister’s response in a January 1996 letter was as follows:”³⁵

I have read your appeal on this issue with great attention, but I fear I must once again emphasize the necessity and importance of the execution of the Trans-Israel Highway. It is superfluous to note that the Highway’s planners, the statutory committees, government Ministers, and the Economics Committee took the issues raised in your letter into account before approving the project.

Thus, the project’s necessity and importance can be stated in his reply without explication because of the long history of prior evaluations (the “**history**” mode of dismissal—Table 2). Three years earlier, before most of the aforementioned history of evaluation had taken place, the decision was already deemed to be history because of an earlier set of milestones. Thus, in a letter to the SPNI on Sept. 13 of 1993, the Ministry of Transport rejected SPNI’s questioning of the project, as follows:

The planning process is now underway, based on NOP3, NOP31, and on a detailed survey now being conducted [by the PWD]. There is no place or justification, now, to go back two years to the beginning of the process. [Emphasis in original]

Even simpler is the dismissal through “**minding one’s own business.**” This, is employed bluntly in a 1993 reply regarding the Trans-Israel Highway from the Israel Lands Authority to the SPNI’s DESHE Planning Forum. This Forum had studied the project and in June of 1993 circulated their findings, which politely but firmly stated that “the teams impression is that there is no security that the current plan of Route 6 is preferred in any respect, including the transport one that the road was intended to serve.” While not calling outright for project cancellation, they suggested a range of “out of the box” comparative evaluations, systemic analyses, and impacts studies that would have taken the wind out of the project for years. The Authority’s reply to a letter on the topic was simple, consisting in its entirety of the following:³⁶

The Director of the Authority has asked me to thank you for your letter of 1.7.93, and with this to clarify that the topic of the Trans-Israel Highway is handled by the Trans-Israel Highway Company.

Another following example shows the compressed nuances of two other methods of dismissal of out-of-box questions (see Table 2): **disciplinary narrowing** and **making the project the benchmark**. In his expert opinion on behalf of the Cross-Israel Highway in the High Court of Justice appeal against the Highway Company brought by the Israel Union for Environmental Defense, a transport expert argued the following.³⁷

The petitioners [the Israel Union for Environmental Defense] claim that the National Council [for Planning and Construction] never considered certain alternatives (public transport, demand management, etc.) because it defined the

space of possibilities too narrowly. It is indeed correct that alternatives such as rail or traffic management were not tested as alternatives to the highway, because in the opinion of all professionals, these are supplementary and not substitute measures. The petition [to the High Court of Justice] represents, in my opinion, a situation in which citizens with a commitment to a special topic, in this case environmental ideologies, appeal to the authorities in the name of public interest, but without checking the topic with the professionals in the relevant fields.

A careful reading shows two interesting and subtle circularities in this argument. One is the narrowing of expertise to close the project box. If the project is declared as a highway project, then the only people really competent to examine its merit will be transport professionals, or, in fact, more narrowly, those with highway-relevant expertise. As is evident elsewhere in this testimony and on other occasions, those with expertise in planning, public health, or even transport of other kinds (some of whom also gave testimony against the Highway), will be seen as imposing their credentials onto a realm in which they have no authority. All the relevant experts support the project, and those who don't are not relevant experts.

Related is the circularity of making the project as the frame of reference, in which case its functions are taken to be the benchmark by which other contenders are to be judged. They will, of course, be found lacking, and thus in good faith patronizingly designated as "supplementary and not substitute measures." In this case, clearly, urban mass transit cannot substitute for a major inter-urban highway corridor. But, then neither could this corridor substitute for the functionalities of mass transit—were these deemed to be the goal function. A more appropriate benchmark of project functionality would be the defined planning goals, not the functions that one project best achieves.

Often the kind of dismissals of out-of-the-box questions discussed above go hand-in-hand with an invitation to join the box: we will be happy to work with you on the "how," and you can be so much more effective, just as soon as you abandon these obsolete questions of "if."

For example, the Ministry of transport official cited above, after dismissing the SPNI's claims as dead issues, continues: "At the same time, however, in my opinion the Cross-Israel Highway Company will not hesitate to involve you in the efforts to complete the planning immediately." Similarly, a year later, in April of 1994, a Ministry of Energy and Infrastructure official, responding to SPNI's presentation against the Trans-Israel, is quite seductive in his offer of relevance. After admitting that project alternatives and the full planning context had not been considered properly in deciding upon the project, the official insisted that despite this the dangers in halting a well developed project at this stage would be excessive. He then makes a friendly plea.³⁸

I will be bold enough to suggest to you to consider a tactic opposite to that you usually adopt. . . Instead of acting defensively, and presenting maximalist objections in order to

achieve restrictions on projects that seem to contradict the goals of SPNI, I recommend taking the position of “leading partner” by developing planning solutions, at your initiative, which coexist more comfortably with the environment. I would even say that the minority (single) position in which you found yourself in the discussion of Route 6, harms your overall goal of nature protection, whereas a position that advances a solution that fits your objectives to some reasonable extent would also have served your purposes better.

Ironically, this official seems to be regarding the out-of-the-box questions as a maximalist tactic, designed to achieve in-the-box project improvements, when in fact SPNI’s suggestions were full-blown rejection, tactically disguised as a reasonable call for consideration of impacts and alternatives. This and the prior examples of this section illustrate how important the box-closing issue is in controversies about large projects of this kind.

Inevitability through Bringing the Future Forward

A final mechanism for constructing the inevitability of a project is through blurring the boundaries between past, present and future—in favor of the future. By this I mean tactics that present the project still under consideration as an accomplished fact. Three points of observation begin to sketch the range of ways and scales at which this can happen.

The first is at the broadest level. The Trans-Israel appeared as a tentative project at a point when planners were weighing an eastern versus compact development scenario for the Tel Aviv region. Some planners wanted to postpone discussion of the Trans-Israel until the issue had been resolved, since the Trans-Israel would clearly tilt the landscape toward the “easterly spread” scenario. But as it moved forward, the Trans-Israel began to be incorporated, even if only in anticipation, in the aspirations and plans of the region. With new settlements planned for the eastern part of the Tel Aviv region—settlements encouraged by the likelihood that the Trans-Israel would serve them in the future—it became a fact that the metropolitan area was spreading eastward. One began to hear arguments that the Trans-Israel was necessary to support Tel Aviv’s natural eastward growth. If this sounds circular, it is.

More broadly, getting as much other planning as possible to include or at least accommodate a project that is still being decided upon is legitimate. This can be a wise procedure to avoid re-planning if and when a project is approved. But as a pending project becomes enmeshed in other plans, it starts to gain a sense of substance, name recognition, and irreversibility, as going back becomes too messy. In this way, its contingency is blurred and alternatives preempted.

A second episode is more mundane. In 1997, the Cross-Israel Highway Company distributed road maps as holiday gifts attached to Israel’s largest subscription newspaper: “Map of Israel’s Roads for the Driver and Traveler: Put in your car, and have a pleasant journey.” The map included the Trans-Israel Highway, marked as an existing road from roughly Yokneam to Kiryat Gat (approx. Haifa to Beer Sheva),

whereas the route of its northern and southern portions and of some incomplete lateral connecting roads is marked as “planned” or “anticipated.” This was in 1997, before a winner of the tender had been announced (1998), another 18 months before financial close was arduously reached (1999), and another 3 years before the first section of 18 kilometers was opened for use (August 2002). Through such details, a project gains recognition as being underway years in advance of its actual achievements.

Finally, for years a massive sign had stood adjacent to the main highway from Tel Aviv to Jerusalem, reading “Trans-Israel Highway: Execution of Phase 1.” This sign (a frequent target of spray-painting environmental activists), marked the construction work for the Ben Shemen interchange—a large project linking existing highways, which would, many years later, come to include the Trans-Israel Highway. Anti-Highway activists were often confronted with the effects of this highly visible sign, in the form of members of the public who expressed surprise that they were fighting a project whose construction had already begun. In other words, referring to a point of future interface with your project as the “first stage” of the project is an additional way to create inevitability-boosting “facts on the ground.” When this interchange was completed in April of 1997, its opening was elevated to be the dedication of the Trans-Israel Highway’s first interchange (attended by the Prime Minister, Minister of National Infrastructure, and key Highway Company figures), even though it would be over five years before any Trans-Israel traffic would pass through it.

Conclusion

I have discussed the construction of a sense of inevitability as a key phase of project advancement, and shown four mechanisms that were used to do so in the advancement of the Trans-Israel Highway. By framing the country’s objective transport needs and the space of possible solutions; by forming descriptions of the project’s origins and development; by limiting debate to variations of the project itself; and by making potential and future states seem more accomplished than they were, project proponents implicitly created the project as an accomplished fact.

These four ploys were not necessarily premeditated, nor were they by any means unique to the Trans-Israel project. They are, I propose, regular and often tacitly performed accompaniments to most large infrastructure and development projects, which typically involve a gauntlet of technical analysis and planning approval. Nor are they disqualified moves or limited to “bad” projects; all the maneuvers described, with the possible exception of some aspects of item 3 (“narrowing debate”), are standard and more or less legitimate features of the emergence of such projects in general. In their milder forms they can be conceived generously: as vigorous public relations and confident planning rather than malevolent manipulation.

At the same time, by assuming rather than justifying a project’s authority, and by dissolving rather than answering challenges, these maneuvers do seem to shortchange rational, participatory, and deliberative planning procedures and decision-making. That a project has to rely too heavily on these perhaps legitimate rhetorical tools, may signal a certain softness in its inherent claims to our assent.

The observations offered below hope to make more visible the inevitability-creating politico-rhetorical moves through which project inevitability is built. They are offered not only as a theoretical insight into the advancement of large projects, but with the hope that that this visibility will encourage a better balance between substance and maneuver for projects under public examination. And, failing that, as a practical aid to those who wish to question and reverse the seeming inevitability of bad ones.

NOTES

- ¹ The highway, *Kvish Hotze Yisrael*, is commonly referred to in English as the Trans-Israel Highway, though the company that forwarded it was named the Cross-Israel Company Ltd. due to an inept translation from Hebrew at an early stage. At times when the grandiosity of the “Tran-Israel” name was felt to be a liability, project proponents preferred other names: the “connecting-Israel highway” (*Kvish Mehaber Yisrael*, sometimes used in oral presentations to make a counterpoint to the Hebrew name, which can mean the “Israel-breaching highway”), Route Number 6 (the numbering within Israel’s road network scheme for north-south roads--the Trans-Israel runs to the east of Route number 4, which runs east of Route number 2), and the Yitzhak Rabin Highway (the Company approached Rabin’s widow for permission to rename it in this way shortly after Rabin’s assassination).
- ² I am grateful to the many people who have generously shared of their knowledge of Israeli transport and the Trans-Israel Highway, or otherwise provided support for this essay. I am also grateful to the following institutions, which supported work that informed the analysis in this essay: The Floersheimer Institute for Policy Studies (which commissioned a review on the planning and evaluation of the Trans-Israel Highway); The Lady Davis Fellowship Trust; The Department of Geography at the Hebrew University of Jerusalem; The Sidney M. Edelstein Center for the History and Philosophy of Science, Technology, and Medicine. Versions of this analysis have been presented at conferences and invited lectures in Israel, the U.S.A., and South Africa. All translations from the Hebrew are by the author.
- ³ A possible eastward branch toward Lake Tiberias in the original plans and maps seems to shelved for now.
- ⁴ It is important to note that these lateral roads are a key component of the project, with a cost and impact of the same order as the project itself . On the cost of the lateral roads, see Ahuva Levi, “The matching of the development of the Trans-Israel Highway (No. 6) to the development of its lateral roads in the Central Region,” a report released in February 1998.
- ⁵ For a dazzling overview of the contours of the new paradigm replacing a mobility-based one see Philip Goodwin, "Solving Congestion (when we must not build roads, increase spending, lose votes, damage the economy or harm the environment, and will never find equilibrium)," Inaugural Lecture for the Professorship of Transport Policy at University College London, 1997; on the mobility/accessibility distinction more specifically, see Levine, J. and Y. Garb (2002). "Congestion Pricing's Conditional Promise: Promotion of Accessibility of Mobility." *Transport Policy* 9: 179-188.
- ⁶ The data is taken from the graph entitled , “International Comparison: number of vehicles for paved kilometer, 1991,” occupying the bottom third of the first page of the undated Cross-Israel Highway Company brochure “The Trans-Israel Highway: Route Number 6.” No source is given for the data, but the figures are similar (though not identical) to the vehicle to network ratios derived from International Road Federation Statistics for that year. See International Road Federation, *World Road Statistics 1989-1993*, 1994 edition. Table 1 "Road Networks as of December 31," and Table 4 "Vehicles in Use on December 31."

7 Quotations from the informational brochure (English version), "The Cross-Israel Highway: Road No. 6," produced and widely distributed by the Cross-Israel Highway Company, Tel Aviv. Similar claims were made before the members of Knesset Finance Committee (*Va'adat Hakesafim*). See the discussion of Nitzan Yotzer and Benni Temkin in protocol # 356 of the August 8, 1994 meeting of the Committee. In Hebrew.

8 Cross-Israel Highway Company Ltd., "Traffic Forecasts and Economic Analysis," Final Report, 1995. (This feasibility study of the Highway is available in English as one of three volumes, produced in November 1995 by the Ministry of Finance/Ministry of Construction and Housing/Trans-Israel Company for companies during the pre-qualifying stage of the international tender for the project.) The vehicle figures are for private cars and light commercial vehicles. On the method of deriving these see Section 4.1 on p. 86.

9 The Highway Company does not give the source for its figures, but they match the International Road Federation statistics cited above for the entire road network.

10 International Road Federation, World Road Statistics 1989-1993, 1994 edition. Table 1 "Road Networks as of December 31."

11 Derived from Table 4 (vehicles) and Table 1 (road network) figures in the International Road Federation, World Road Statistics 1989-1993, where the length of road network in each country is broken down by each type of road.

12 Yaakov Garb, *The Trans-Israel Highway: Do We Know Enough to Proceed*, Working Paper #5, Floersheimer Institute for Policy Studies, April 1997.

13 Building on a Kuhnian understanding of scientific development, this perspective was developed in the work of David Bloor, Barry Barnes, Michael Mulkey and others on the sociology of scientific knowledge, and in the Social Construction of Technology (SCOT) approaches of Bijker and others.

14 For a few kindred studies, drawn from this large field, see, for example, Latour, B. (1987). Science in Action, Harvard University Press; Latour, B. (1996). Aramis or the love of technology, Harvard University Press; Bijker, Hughes, et al., Eds. (1987). The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology, MIT Press; Bijker and Law, Eds. (1992). Shaping Technology/Building Society, MIT Press.

15 This principle was first formulated by the "strong program" in the sociology of scientific knowledge. Landmarks here are Bloor, D. (1976). Knowledge and Social Imagery. London, Routledge and Kegan Paul. Barnes, B. (1974). Scientific knowledge and sociological theory. London, Routledge and Kegan Paul. Barnes, B. (1977). Interests and the growth of knowledge. London, Routledge and Kegan Paul. Mulkey, M. (1979). Science and the sociology of knowledge. London, Allen and Unwin.

16 Note that I call this a heuristic, sidestepping the thorny questions raised by the stronger forms of a constructionist approach, which question—rather than just bracket—the foundations of theories in truth.

17 From "The Trans-Israel Highway," manuscript version of a presentation by the Chief Engineer of the project at a conference on the social and environmental impacts of the Trans-Israel Highway held at Bar Ilan University, June 1998. In Hebrew. Similar accounts appear in other of the Company's promotional material: see, for example, "Timeline of Central Actions For Approval of Route 6," 1/1/96 (document 37381). In Hebrew.

18 For a more detailed summary of the statutory background of the project, from
the perspective of the Highway Company, see Chapter 2 in the Ministry of
Housing/Ministry of Finance/Cross-Israel Highway Ltd. pre-qualifying
documents, Vol. 1 “Pre-qualification Information and Questionnaire.”
November 1995.

19 From a 1996 interview by the author with Prof. Elisha Efrat, Editor of the
Outline Plan.

20 For the scenarios, see “Investment Plan for the Central Region: Recommended
Road Network for the Year 2010,” a report by The Israel Institute of
Transportation Planning and Research for the Ministry of Construction and
Housing: Public Works Division, April 1990, Report # 129, pp. 50-51. In
Hebrew.

21 The quotation on rail is from the aforementioned English version of the Cross-
Israel Highway Company feasibility study, Vol. 2, "Traffic Forecast and
Economic Analysis," section 1.5, p. 10.

22 At issue in particular were the capacity-constraint functions used, and especially
the values for junctions, which, being higher than usual, inflated the projected
traffic diverted onto the Trans-Israel, and thus the number of lanes needed.

23 National Outline Plan 31 (TAMA 31), Vol. 4 (“Explanatory Overview”), March
1992, p. 54. In Hebrew.

24 TAMA 31, pp. 54, 27, 43, 223, and chapter 14.

25 TAMA 31, p. 173.

26 TAMA 31, p. 172, p. 54.

27 Garb, *The Trans-Israel Highway: Do We Know Enough to Proceed?*

28 The judgment was given on 28/7/96, and appears as “*Bagatz 94/2920*” in the
High Court of Justice records. In Hebrew. For an analysis of this case, see
Noga Morag-Levine (2001). *The Politics of Imported Rights: Transplantation
and Transformation in an Israeli Environmental Cause Lawyering Organization,
Cause Lawyering and the State in a Global Era*. A.Sarat and S.Scheingold,
Oxford University Press.

29 For a review of the arguments for a comprehensive environmental impact
statement of the Trans-Israel Highway see the expert testimony of Prof. Ernest
Alexander in the "Matter of Adam Teva V'Din versus The National Council for
Planning and Others," High Court of Justice (BAGATZ), case 2920/94.

30 Yehuda Gur, Shuki Cohen, and Motti Zaaga. *Transport in Israeli Cities at the
Start of the Twenty-First Century: Trends and Degrees of Freedom* which
appears in the Israel 2020: Master Plan for Israel in the Twenty First Century,
1996. Stage Three, Report # 18, pp. 48-9. In Hebrew.

31 Interview with Moshe Barnea, former Secretary of the organization, Oct. 2003.

32 Personal letter dated 11 January 1996. Copy in possession of author. In
Hebrew.

33 For a comprehensive chronology of the environmental campaign against the
Highway see Mical Meizlish’s 2003 report “The Battle Against the Trans-Israel
Highway,” available from the Jerusalem Institute for Israel Studies. In Hebrew.

34 Late Member of Knesset, A. Weinstein, at the conclusion of the Knesset
Finance Committee Meeting on the approval of the Trans-Israel Highway Law
(August 8, 1994). Protocol number 356. In Hebrew.

35 Letter of January 7, 1996, reference “*shotef 7210*,” copy in possession of
author. In Hebrew.

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- ³⁶ August 1, 1993, reference w6175. Copy in possession of the author. In Hebrew.
- ³⁷ Testimony of Prof. Ilan Salomon in the expert opinions submitted on behalf of the Highway to the High Court of Justice. In Hebrew.
- ³⁸ Letter from Omri Lulav, April 10, 1994, reference “4-94,” to Yoav Sagi.