HIGH SPEED TRAINS
FAST TRACKS TO THE FUTURE

edited by

John Whitelegg,
Staffan Hultén
&
Torbjörn Flink

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Public policy and the development of high speed trains in France and the USA[1]

Frank R Dobbin, Department of Sociology, Princeton University, New Jersey

Fired by the success of its first high speed train link between Paris and Lyon, the French government is thinking of more. *(The Economist 1984)*

A private group today announced a proposal to build what it hopes will be the nation's first high speed train... from Houston to Dallas. *(New York Times, Belkin, 1989)*

FRANCE AND the United States have pursued dramatically different policies to facilitate the growth of high speed rail transport. In France, central state planners have orchestrated the development of high speed train services, while in the United States that task has been left to entrepreneurs and state and local governments. This difference is surprising in the light of the fact that passenger rail transport is a state monopoly in both countries.

This chapter examines high speed train policy in the two countries, highlighting parallels in each, with the policies employed to promote railways during the 19th century. Why have the United States and France pursued such divergent high speed train (HST) policies, and why are their HST policies so strikingly similar to those adopted to promote steam railways? I argue that the answer lies in persisting organisational capacities and cultural representations of the French and American states.

In recent years institutionalists have pointed out that traditional interest group and rational choice approaches to the state simply do not explain the continuity over time in national policy strategies. Nation states pursue internally consistent problem-solving strategies over long periods of time, even as regimes with radically different political orientations take office. Pioneering work in this field comes from political scientists.

Stephen Krasner (1978) found in an historical study of American raw materials policy that, one after another, American administrations have pursued a single broad policy strategy, advocating market pricing and allocation — even when that policy disadvantaged domestic firms. John Zysman (1983) found in a comparative study of

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France, Britain, West Germany, the United States, and Japan, that nations tend to pursue internally consistent policies to promote diverse industries. Each country adopts policies that resemble its past policies.

The dilemma these studies pose for the predominant perspectives on policy formation is that they show policy shifts within nations — the usual focus of policy studies — to be relatively inconsequential in the light of persisting cross-national differences in policy.

The "New Institutionalism" in politics

Institutional theory locates policy continuity in state institutions. States repeat their previous policy strategies when faced with new problems because they have at their disposal the institutional capacities that were developed to effect previous policies. Stephen Krasner (1984) uses the analogy of "branching" to describe the process. Once a nation state has made a particular policy choice and "branched" in one direction by creating a certain set of policy institutions, it cannot easily branch in the opposite direction because prior choices constrain present options. Existing policy institutions facilitate similar policies, and they may disable dissimilar policies. Thus Skocpol and Finegold (1982) find that the presence of a federal agricultural agency at the outset of the Great Depression facilitated the job of Roosevelt's Agricultural Adjustment programme, while the virtual absence of an industrial agency doomed the efforts of the National Recovery Administration.

This perspective is intuitively appealing, for it suggests that if a new policy is predicated on the use of, say, a national bank, that policy is most likely to succeed in a nation that has such a bank.

A number of "institutional capacities" studies have examined cases of policy failure, in which novel policy strategies fail during implementation due to the absence of adequate administrative capacities. The National Recovery Administration is a case in point. However, in the vast majority of cases, prior policy strategies are replicated not because existing state capacities select out unusual policies, but because states initially choose new policies that resemble existing ones.

Much of the process of policy reproduction occurs at the stage of policy conceptualisation. Because policy-makers in different nations tend to envision mutually exclusive sets of policy alternatives, broad policy choices are actually made when alternatives are being formulated. Thus, when it came to building high speed railways, it virtually never occurred to Americans that Washington might plan and build a network. Equally, it never occurred to the French that private interests might take over these tasks.

Institutionalised cultural meaning

I want to suggest that institutionalised cultural meaning can explain these different ways of conceiving public problems and their solutions. Existing social structures offer models of how the world works to policymakers and to the public. They shape how we think about what is rational, what is fair, and what is possible (Dobbin forthcoming).

As Max Weber argued, notions of rationality are highly institutionalised in modern societies. Institutionalised rationality also varies considerably from one

modern social system to the next. Recent social constructionist approaches to institutions offer some useful insights.

First, rationalised cultural meaning takes the form of means-ends designations which act as prescriptions for action (Douglas 1986; Meyer 1987).

Second, rationalised meaning is inherently falsifiable, and is constantly subjected to empirical validation. Commonly understood means-ends relationships can be falsified in much the way that scientific paradigms are falsified. Minor empirical inconsistencies may be incorporated into existing meaning systems, but major inconsistencies tend to elicit alternative explanatory frameworks (Wuthnow 1987).

Third, rationalised meaning is inherently collective, and this is how we can distinguish it from interest group ideologies. Rationalised meaning is comprised of the taken-for-granted understandings of the world that entire societies hold (Sewell 1985; Berger and Luckmann 1965).

Rationalised meaning appears in what Kenneth Dyson (1983) calls "industrial culture", which refers to the institutionalised logic of economic organisation in a nation. Industrial cultures are comprised of the customs of economic life and the logics that underlie those customs.

In schematic terms, the United States has an industrial culture that is market-oriented and France has an industrial culture that is oriented to state concertation of the economy. When we try to understand policy choices in these two countries we can identify state institutional capacities that contribute to particular choices. We can also identify predispositions to certain courses of action, which I attribute to institutionalised cultural meaning, that influence how problems are conceptualised.

Capacities and meaning in the French and American states

The social constructionist approach employed here treats instrumental social institutions as embodiments of culture, and as such it suggests that organisational and cultural aspects of social institutions are inextricable. Thus, when American citizens promoted early railways under the auspices of local governments in the 19th century, they did so in part because substantial organisational resources were situated at the local level, and in part because local government had been constructed as the appropriate locus of collective action. Empirically it is difficult to disentangle these two motivations, and the social constructionist approach suggests that the effort to disentangle the two is motivated by a false distinction between structure and culture that pervades modern social thought.

However, one important reason to try to distinguish the cultural from the structural is that a particular social structure may have diverse cultural meanings in different societies because culture is not a direct reflection of structure.

Capacities

Institutional capacity refers to the administrative and technical configuration of the nation state. I will argue that state capacity is important, in part because it determines where decision-making and public action will be located, for example, in the central state or at the local level. Figure 13.1 outlines characteristics of state structure that proved salient to the formation of policies to promote railroads.

Figure 13.1

INSTITUTIONAL CAPACITIES	
FRANCE	UNITED STATES
Centralised state structure	Federal state structure
Professionalised bureaucracy	Amateur bureaucracy
State control of engineering	Private-sector control of engineering
State control of transport administration	Private-sector transport administration

STATE CENTRALISATION-FEDERALISM

By the early 19th century, the French state provided the West's benchmark of centralised authority. A series of French regimes had reorganised public authority to undermine the power of the local nobility and to concentrate military power in Paris (Anderson 1974). Local and provincial governments had no independent authority to speak of. That system has survived a series of revolutions in government (Hall 1986).

By contrast, political authority was deliberately decentralised in the blueprint for American government. The separate states were afforded extensive decision-making powers, and localities were granted wide powers of self-determination (Tocqueville 1945).

THE BUREAUCRACY

To extend political and military control over far flung feifdoms, early French monarchs built an elaborate Parisian bureaucracy, with tentacles in the provinces in the form of centrally appointed officials who carried out the King's will. Over several centuries a complex bureaucracy arose which was concerned with military matters, commerce, and transport (Fischer and Lundgreen 1975; Suleiman 1974). As Tocqueville (1955) insists, France's administrative structure was not drastically changed by the age of revolution.

By contrast, the American government had unusually meagre central administrative control. Weak bureaucracies existed for the mails and military, but in other areas federal administrative powers were minimal (Skowroneck 1982). It was not until the early 20th century that the federal government developed appreciable administrative powers, and the American bureaucracy has remained significantly weaker than its European counterparts.

CONTROL OF ENGINEERING

In France, civil engineering had long been a state monopoly, for the state built the nation's highways and canals. The state employed the lion's share of the nation's civil engineers, and trained those engineers in public academies. Of particular importance

was the Corps des Ponts et Chaussées (bridges and highways corps), which the King established in 1716 and to which he granted an independent école in 1775 (Fischer and Lundgreen 1975). Because the state undertook all major civil engineering tasks, engineering became part of the civil service.

By contrast, turnpikes and canals had, with few exceptions, been designed, built, and operated privately in the United States (Goodrich 1960, p21). Army-trained civil engineers often designed public transport projects, but they did so after leaving public service. Washington never attempted to monopolise the education of civil engineers in a public academy; instead private universities and institutes trained civil engineers. In the 20th century, as governments began building turnpikes, sea ports, and airports with public monies they turned to private-sector engineers for assistance. The growth of public accommodations, then, did not lead to the centralisation of control over engineering.

Location of transport administration

Well before the railway era, the French state operated turnpikes (royal roads) and canals. The Administration Générale des Ponts et Chaussées (Bridges and Highways Board) had the task of designing and operating inter-city roads in the 1830s, when railway technology first appeared in France (Price 1983).

Today most facilities for public transport are owned and operated by the state, including the SNCF, Air France, and domestic airlines. By contrast, American turnpikes and canals were built and operated by private interests in the 19th century. In the 20th century state and federal governments took over the administration of highways, and the federal government has reluctantly taken over inter-city passenger railways. Yet the air transport, bus, and trucking industries remain privately managed.

Culture

Rationalised cultural meaning is largely the result of everyday experience with social institutions, and it frequently takes the form of no-nonsense, demystified, means-ends designations oriented to instrumental ends (Swidler 1986). I argue that public institutions in France and the US contributed to substantially different notions of collective action, economic rationality, and the role of government in the economy. Figure 13.2 outlines those differences.

Collective actors

In different nations, social institutions produce different notions of the appropriate source of collective action in society, and those notions depend to a large extent on where legitimate collective authority is lodged. France's active state has contributed to the social construction of the central state as the corporate entity that embodies the interests of the nation (Hayward 1986; Zeldin 1979).

By contrast, American political institutions depict authority as emanating from below, and have contributed to the notion that unhindered citizens and regional governments can best represent and pursue the interests of the community and nation (Tocqueville 1945). In the American construction of collective action, the central state poses a potential threat to the legitimate authority of localities and private entities to pursue goals such as economic growth (Lipset 1963).

Figure 13.2

INSTITUTIONAL CULTURE	
FRANCE	UNITED STATES
Central state as collective actor	Localities and private interests as collective actors
State rationality	Market rationality
Government concertation of economy	Government incentives & market regulation

Location of economic rationality

Social institutions also represent the driving force of economic growth variously across nations (cf Zysman 1983). In both countries, public notions of the logic of economic rationality have retained certain elements since the dawn of the railway age. France's military and political successes had long been attributed to the wisdom and power of the absolutist state, and the same logic was found in discussions of economic life. Since at least the time of Richelieu the French had thought of state concertation of the actions of individuals as an important component in economic growth; only the state could orchestrate the inchoate actions of individuals so as to achieve the collective goal of growth (Machin 1977; Hayward 1986).

By contrast, Americans had believed in the efficacy of private action and came to see market mechanisms as the only force that could rationalise the actions of individual citizens. In part this was the case because the writers of the Constitution had built in safeguards against the abuse of public power, which led Americans to think of public power as inherently corrupt and disruptive to private life.

One result of these differences is that the French have had relatively more confidence in the rationality of state concertation, and Americans have had relatively more confidence in the rationality of market mechanisms.

Role of the state in the economy

Political culture carried related notions of the exact role each state should play in its economy. French political culture identified state concertation of the economy as proper. State orchestration of economic life since the time of Louis XIV had led the French to view oversight and orchestration as the rightful role of the state.

By contrast, in the United States the central state had been constructed as a weak overarching framework that existed to facilitate the operation of political democracy and economic liberty at the local level. The role of the central state in the economy was at first limited to enabling states and localities to pursue their goals (Miller 1959). After a brief flirtation with a federal role oriented to providing positive incentives to private industry, public policies led Americans to believe that the federal government could best serve the public by stimulating market competition.

How did these state characteristics influence railway policy in these two countries?

Rail policies in France and the US

Figure 13.3 outlines the principal differences between the railway policies of France and the United States. It will be shown below that these differences characterised both 19th century steam railroad policies and 20th century high speed train policies.

Figure 13.3

POLICIES GOVERNING STEAM RAILROADS AND HIGH SPEED TRAINS	
FRANCE	UNITED STATES
Central state initiative	State and local initiative
Public orchestration of financing	Private and regional financing
Public route planning	Private route planning
Public choice of technology	Private choice of technology
Public orchestration of construction	Private orchestration of construction

France: The Grande Réseau and the TGV

The earliest French railways were private lines built to transport coal. Soon after the introduction of steam locomotives the French state assumed responsibility for railway planning and development. Fiscal constraints prevented the state from building and operating a rail network without private aid, but state engineers designed a centralised rail system that could be nationalised when circumstances allowed. Private companies provided partial financing, and in turn were given operating franchises (Doukas 1945; Guillamot 1899). In 1937 the French government nationalised the railway system under the Société National des Chemins de Fer (SNCF).

By the early 1970s the SNCF began to show interest in high speed rail technology. To accommodate rising demand on the Paris-Lyon railway the SNCF expected to have to build a second line. Instead, in 1974 the SNCF proposed to build a high speed passenger rail line, with electric-powered Trains à Grande Vitesse (TGV) that would travel at 270kph. Construction began in 1976, and service on the line commenced in 1981.

The line was an instant success, and in less than a decade more than a dozen new lines were under construction or on the drawing board. Today France has the most elaborate high speed rail network in the world, and the French have begun to export their technology and know-how.

PUBLIC INITIATIVE

Before private enterprise built a single important railway in France, the state assumed the initiative for designing and putting into place a truly national rail network. The

network was centrally planned so as to achieve maximum efficiency and to best serve the needs of France. The Bridges and Highways Board initiated all railway projects, and while legislative approval was required for new lines, the efforts of private interests and local governments to initiate projects on their own, or even to sway the Board, were ignored (Lefranc 1930).

In the early 1970s the SNCF initiated the first TGV project for the route between Paris and Lyon. It was the SNCF's engineers and economists who, facing declining ridership and a contracting rail network in the mid-60s, saw in Japan's Shinkansen line between Tokyo and Osaka a means to reinvigorate the industry (Faujas 1991).

It was those SNCF engineers and economists, with substantial autonomy to pursue projects on their own initiative, who established a Research Department at the SNCF and undertook the studies that led to France's TGV system — just as it was the engineers at Ponts et Chaussées who initiated the studies that eventuated in France's huge centralised rail network in the 19th century.

Public orchestration of financing

In the 19th century the state assumed responsibility for guaranteeing that the three major capital costs associated with railways — land, construction, and rolling stock — would be met. The state acquired the right of way for each line, and for most lines either laid the track itself or contributed toward the cost of construction (Kaufmann 1900). The private franchises were designed to attract private capital — especially from London money markets — to pay for rolling stock and to contribute to construction costs (Dobbin forthcoming).

The SNCF similarly arranged TGV financing to combine private and public sources of funds. As before, a capitalisation scheme was developed which could attract foreign capital, and as before the scheme was successful; one third of the capital for the first TGV line came from New York banks alone, and the SNCF went to international money markets again to fund subsequent lines (US House 1984, p26; Macdonald 1991). For the Paris-Atlantic line the state found fully 70 per cent of the 13 billion francs needed in private money markets (Economist 1984; Macdonald 1991).

Despite the remarkable financial success of the first two lines, the state continues to provide public aid for future progress on the TGV, including a total of about 66 million ECUs for the period 1990-1994 — largely to be used for the design of a third-generation TGV (European Information Service 1990).

More generally, the SNCF retains the authority to raise funds as it sees fit. For instance, it has financed rolling stock by selling new TGV train sets to a banking consortium and then leasing them back (Black 1991; Freeman 1991).

Public choice of routes

The French state chose all major railway routes in the 19th century. In the early 1830s, when only short coal-carrying lines had been constructed, the state placed a moratorium on the granting of private charters until state engineers could develop a national route plan of their own. State engineers were given full authority to make route decisions, and they fastidiously refused to be influenced by local politicians who wanted rail services, arguing that if localities were allowed to influence route decisions the nation would end up with an incoherent rail system (Villedeuil 1903).

Likewise, state officials at the SNCF have been responsible for route and destination decisions for high speed trains. In the aftermath of the Paris-Lyon line's financial success, the government planned lines connecting Paris with Lille, Calais (and the Channel Tunnel), and Brussels to the north; with Le Mans, Tours, and eventually Bordeaux to the south-west; with Nancy and Strasbourg to the east; and with Marseille and Cannes to the south (Neher 1989).

As in the 19th century, state technocrats retain authority to plan new lines on objective technical grounds; nonetheless, when the SNCF last unveiled a plan, Mitterand's Government sent it back to the drawing board and called for a more ambitious and aggressive one (Black 1991). The new scheme, introduced in May 1991, called for 16 new TGV lines that would require 4,700kms of track to be laid at a cost of some 200 billion francs (Faujas 1991c). The SNCF's planners have largely ignored the concerns of localities and environmentalists who have sought to influence route decisions, insisting that, for the good of the nation, such decisions must be made by clear-minded technocrats, not by groups with partisan and regional demands.

Public design of technology

Engineers from the Bridges and Highways Board made all relevant engineering decisions for the nation's steam railways. They made decisions about bridge and tunnel construction, the circumference of curves, the incline of the track, and so on. When it came to rolling stock, the board established such strict technical specifications that, for all intents and purposes, they designed the carriages and locomotives themselves (Dunham 1941).

State engineers have similarly been central in the design of high speed train technology. They have established construction standards to ensure reliability and safety. They have also placed France at the technological vanguard of high speed rail transit by designing the TGV trains virtually from the ground up. The TGV's own rolling stock division — GEC-Altshom, a subsidiary of the Compagnie Générale d'Électricité — engineers the train sets. The TGV's research and development efforts have led to a series of technological advances that enable the French to market their trains internationally (Neher 1989). In 1991 GEC-Altshom led a consortium called the Texas TGV in a successful bid for a $5.8 billion contract for a high speed rail connection between Dallas and Houston, and the makers of the TGV are now bidding on contracts in Taiwan, South Korea, Canada, and elsewhere in the United States (Agence France Presse 1991).

Public construction

The state built a number of France's early railways itself, and closely supervised those built by private contractors. Public officials reasoned that if France wanted well-built railways that would serve the nation, the state would do best to build them itself (Audiganne 1858). Private parties, the French reasoned, would build shoddy lines because they would try to minimise cost in order to maximise their own profits. By contrast, public construction would ensure that all funds were being used to maximise the quality of rail lines.

Likewise, on the Paris-Lyon line, the state never seriously considered franchising the route to a private concern for construction and operation, despite the fact that the line was projected to turn a profit, and therefore might have attracted private bids.

Proponents of the Paris-Atlantic line, which was likewise projected to turn a profit, did not advocate privatisation, even when Mitterand stalled the project owing to a fiscal crisis (Economist 1984).

The origins of French rail policies

We have argued that these outcomes may be traced to state capacities and institutionalised cultural meaning.

Institutional capacities

In the 20th century, as in the 19th, French state capacities facilitated public control of transport. The state has held the ability to take the lead in the railway industry, and private sector capacities in transport have remained undeveloped. A comparison of figures 13.1 and 13.2 suggests why this was the case.

First, the central state took the initiative for the development of both steam and high speed railways, in part because French state structure was centralised, which meant that provincial and local governments could not challenge the authority of Parisian bureaucrats to do so; and, importantly, could not effect rail plans of their own.

Second, the centralised state structure enabled Paris to orchestrate the financing of both 19th and 20th century rail networks, in part because it enabled the central state to make unilateral decisions about where to invest public monies. Of course, the ability of the central state to control public funds was key here, and that ability was a result of France's centralised revenue-gathering system. In addition, the state had significant prior experience in transport administration in both periods; the state had operated turnpikes and canals before the advent of steam railways, and air transport and conventional railways before the advent of high speed trains.

Third, state domination of engineering made the state the natural candidate to design the railway system, as well as the rolling stock. France's professionalised bureaucracy was also paramount here, because professional norms allowed technocrats to remain aloof from regional interests in their planning decisions. Just as the presence of extensive engineering expertise in the state was a necessary condition for public route planning, the absence of extensive private-sector civil engineering expertise made private route planning impracticable. France's minister of commerce and public works complained of the privately-drawn railway plans submitted to the state in the early 1830s:

> **"Often... the Bridges and Highways Board is obliged to have the plans redrawn" (Moniteur Universel 1833, p1206).**

Fourth, these same capacities led the French state to select track and rolling stock technologies in both centuries. The state has held the lion's share of the nation's expertise in transport engineering and administration since before the invention of the steam locomotive, and since 1937 has operated the nation's railways.

Finally, public orchestration of construction was facilitated by the fact that the state dominated administration of the canals and public highways in 19th century France, which meant that the state was better equipped than were private transport concerns to coordinate construction. While private barge and stage coach companies operated on canals and highways, the state had built and managed both sorts of facilities. By the 20th century the situation was little changed.

INSTITUTIONALISED CULTURAL MEANING

While institutional capacities clearly enabled the French state to influence the course of railway development, the policy agenda was predicated on the presumptions that the central state is an appropriate collective actor, that the state can be a source of rationality, and that concertation of economic life is an appropriate role for the state. The French took for granted that the state should coordinate railway development, and this more than anything shaped the course of railway policy.

The fact that the French state is recognised as an appropriate collective actor coloured railway policy in significant ways. As a result, in the words of *The Economist*:

> **"For the French, railways were always an arm of the state and they... recognised their crucial strategic importance." (1985a p55).**

In other words, because it was considered proper for the French state to take responsibility for achieving collective goals and to preclude private actors and local governments from doing so, the French assumed in both periods that the railways, and any other industries that were vital to the economy, could and should be governed by the state.

The notion that the state bureaucracy could achieve economic rationality through expert planning was found in debates surrounding route decisions in the 19th century, when railway supporters argued that state officials could best design a network that would serve the nation, and that the interference of private parties and local governments would undermine the overall rationality of the system (Audiganne 1858).

For the new high speed rail network, public officials and private parties agreed from the outset that state orchestration would eventuate in the most efficient service. Transport minister Paul Quiles reiterated those sentiments when he argued that privatisation would not render the project more efficient:

> **"Our analysis shows there is no advantage to the community — privatisation is not on the agenda. Our aim is to have a railway in a sound financial state, meeting the demands of the community. Good management is in no way at odds with the concept of a public company." (Quoted in Black 1991).**

As a result, neither private parties nor politicians have contended that private entrepreneurs should undertake high speed train developments.

The widespread understanding that the French state can, and should, orchestrate economic growth also played an important role in setting the policy agenda surrounding steam railways and high speed trains. Key here is the notion that state bureaucrats can and should do more than simply make mundane managerial decisions. As one frustrated British Rail official put it:

> **"'The French ministry runs a transport policy, it doesn't try to manage the railways,' because the Ministry is, for the French, the proper place for the development of a comprehensive transport policy." (Economist 1985a, p60).**

The ministry had such blanket authority to plan for the future that Paul Quiles has recently called for opening the decision process to the input of interested parties:

> **"I would like (the Ministry) come out into the open... Debate, for me, is a method of political action." (Quoted in Faujas 1991b).**

Quiles proposes that each new project should be presented in a public forum for debate, rather than, as in the past, proffered by the Ministry as a *fait accompli*.

In short, the same assumptions about the nature of collective action, the locus of economic rationality, and the appropriate role of the state that influenced steam railway policy continue to influence transport policy today. As a result, French policymakers and railway enthusiasts continue to presume the central state to be the proper actor to spur railway development, and continue to believe that central coordination of transport will eventuate in a more rational and effective rail system than will unbridled private interests and market forces.

The United States: Each town for itself

The earliest American railways were built by private entrepreneurs, frequently with the financial backing of state and local governments. State and city governments contributed to the costs of railways built westward from Philadelphia, New York, Baltimore, and Boston in competition to secure the first transport link to the West. Municipal governments in the East and Midwest competed with one another to attract railway services, and entrepreneurs competed to win franchises between major metropolitan centres (Fisher 1947).

Later, Congress provided land grants to trans-continental railway builders to stimulate development. However, graft and corruption at the local, state, and federal levels brought public aid to railroads to an end. By the late 1960s it had become clear that if Congress did not nationalise the passenger rail service and portions of the freight service, America's rail system would collapse, and Congress reluctantly did just that.

In the 1970s American state and local governments began to show interest in high speed rail transport to remedy problems of overcrowding on highways and in airports (Ekistics 1972). While passenger railway service was operated under a public monopoly in the United States, proposals for high speed trains came almost exclusively from private interests and local governments. Amtrak and Congressional leaders agreed that Washington would not initiate high speed rail transport. They argued that the federal government could not afford to build high speed railways, and that the most efficient system would be produced by market mechanisms. As a result, a number of states and localities have encouraged private groups to develop plans for high speed trains. As in the 19th century, states and localities have put together incentive packages including rights-of-way, promises of stock subscriptions, and financial assistance through public bond offerings. Next I examine these policies in more detail.

State and local initiative

States and municipalities retained substantial decision authority after the Revolution. Local and regional governments used their powers, and funds, to build rail lines that would serve them. Few governments actually built railroads, but many initiated railway projects and offered incentives to lure railway entrepreneurs, usually in the form of government-backed bonds.

By 1861 state and local governments had provided roughly 30 per cent of the total capital costs of the railroads, exclusive of land grants (Goodrich 1960, p. 268-270). The federal government took the initiative to promote inter-state railways, at the

behest of states, in a half-dozen cases.

In the 1980s initiative for high speed train projects has come from state and local governments. Florida's legislature established a High Speed Rail Commission in 1982 to design incentives that would attract private parties to bid for a 314-mile Miami-Orlando-Tampa franchise, which is estimated to cost between $2.2 and $4.6 billion[2] (Klein 1984, p34). State and local governments have likewise initiated studies for lines in California, Nevada, New York, Pennsylvania, Ohio, Michigan, Illinois, Texas, New Mexico, Oregon, and Washington (Cupper 1984, p30; Wiedrich 1989; Subcommittee on High-Speed Rail Systems 1985).

The same logic of "rivalistic state mercantilism" that characterised state and local debates about steam railroads can be found in the high speed train debates today (Bishop 1907; Hungerford 1928). In 1988 Florida House Speaker Jon Mills echoed the kind of boosterism that characterised steam railroad rhetoric:

> **"We're going to have the most modern rail system in the world. We will be ahead of California, Massachusetts, Illinois and all of our technological competitors." (Quoted in Boston Globe 1988)**

In addition, in both periods, governments sought to attract private developers to the plans they initiated by offering land grants. In the 19th century, state and federal governments provided grants of large tracts of land to railway builders, who used land grants to secure the capital needed to build the lines (Haney 1910; Henry 1945). Similarly, state officials in Florida and elsewhere have proposed offering land grants to high speed train developers, in addition to rights-of-way, which would enable them to attract capital in the same manner (Klein 1984, p34; Wiedrich 1989).

ABB, the international bidder that received a green light to proceed with plans in Florida, noted that the Florida plan was based on a public-private partnership "modelled on the approach which encouraged construction of railroads across the western United States and down Florida's peninsula" (quoted in Railway Age 1989).

Private and regional financing

For most 19th century railroads, state and local governments offered stock and bond subscriptions as incentives to private developers. After corruption and graft sullied the notion of public investment in railroads, most states outlawed future state and local aid. While Congress financed feasibility studies for trans-continental routes, in only one case did it provide financial assistance — in the form of a bond offering. In a half-dozen cases Congress offered land grants as incentives to inter-state railroads, but strict constitutional constructionists argued that even land grants exceeded the constitutional powers of Congress (Sanborn 1899).

Since the 1970s state and federal legislatures have financed feasibility studies for high speed rail systems, but have refused to underwrite the cost of construction.[3] After funding the first feasibility study in Florida, the legislature insisted that developers pay for future studies and pay the costs of the public hearing and approval process (Railway Age 1989).[4]

As in the 19th century Florida and other states have proposed the use of tax-exempt bonds to finance rail construction, and in 1984 federal legislation was introduced to allow governments to issue tax-exempt public bonds for high speed train projects (Cupper 1984, p39).

At the federal level the Senate allocated a million dollars to the Army Corps of Engineers, which did the feasibility studies for the trans-continental roads, for feasibility studies into magnetic levitation technology. The Department of Transportation allocated a similar sum for its own studies (Feder 1989). However, federal officials steadfastly refuse to consider public financing of construction. At a privately-organised conference on high speed trains in 1984 Federal Railroad Administrator John H Riley vowed "firmly and repeatedly, that no federal funding is available to finance the tremendous capital costs associated with systems" (Cupper 1984, p30). The succeeding head of the Federal Railroad Administration, Gilbert Carmichael, argued that only small federal sums would be available:

> **"There will be Federal money, but it will go to the systems where we see big commitments from states and localities, industry and investors." (Quoted in Feder 1989).**

PRIVATE ROUTE PLANNING

Railway entrepreneurs made key route and destination decisions for America's earliest railroads. State and federal governments were loath to dictate to private companies, but they did use incentives to encourage railway companies to build lines that would serve them. Because railway developers wrote their own charters, which were then approved by state legislatures, they retained control over route decisions; by contrast, in France, state bureaucrats designed lines and wrote charters for private firms. Even in the case of the trans-continental lines, Army engineers only undertook the initial feasibility studies and did not plan the actual routes (Dobbin forthcoming).

The Florida legislature, and its High-Speed Rail Commission, have insisted that private initiative and market forces should determine the outline of the rail system. Private franchise applicants have been directed to submit route and station plans as well as financing proposals (Railway Age 1989). In fact, in each of the thirteen regional high speed train studies initiated by 1985, state and local governments allocated planning and feasibility studies to the private sector, either by promising

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[2] The Texas legislature likewise established the Texas High Speed Rail Authority to award franchises in 1988 (Boston Globe 1989). California and Nevada established the California-Nevada Super Speed Train Commission to attract a private entity to develop a Las Vegas-Los Angeles train (Miller 1989).

[3] The one exception to federal reluctance to get involved in high speed rail is on the Northeast Corridor. Amtrak has upgraded Boston-New York-Washington track so that trains can now run at 125mph on some segments of the route. Amtrak is now considering a $300 million plan to link Boston and New York by high speed train service, cutting the run to three hours or less which transportation experts believe would offer serious competition to the airline shuttle services (Chicago Tribune 1988b). Amtrak appears to be willing to take initiative on this route because it constitutes an upgrade of a line it inherited and because it involves so many states that no one state can be expected to take responsibility. The project has been jointly undertaken by Amtrak and the Coalition of Northeast Governors (Chicago Tribune 1988a).

[4] In Texas the German High Speed Consortium spent $1.2 million on a feasibility study for a Houston-Dallas line, and a firm called Texas Railroad Company spent a like amount (Engineering News Record 1985a). The latter company also contracted to buy a bankrupt railroad's half interest in a Dallas-Houston right-of-way for $17.5 million.

franchises to successful planners or by employing private firms to undertake studies (Subcommittee on High-Speed Rail Systems 1985).

PRIVATE CHOICE OF TECHNOLOGY

In the 19th century, American governments exercised virtually no control over railway technology. Neither Congress nor the states tried to standardise rail gauge, construction standards, or rolling stock technology. One result was that by 1861 half of America's total trackage was in some gauge other than the 4ft 8½ inches that would become standard, and by the end of the 1860s American railroads still used at least a dozen different gauges (Westbay 1934, p32; Poor 1871).

It was not until 1886 that railroads agreed among themselves to standardise track gauge. Another result was that railroads were not required to instal brakes on trains until near the end of the century.

A similar situation is developing in American high speed railway technology. By contrast with France, the American government has made no effort to influence the choice of technology, nor even to standardise technology. It is not unlikely that different American high speed rail systems will use incompatible roadbeds and propulsion systems, which have been developed in Sweden, France, Germany, Japan, or Canada (Boston Globe 1988; Armstrong 1989).

The one government foray into technology development took the form of federal funding for basic research at Massachusetts Institute of Technology in the early 1970s. That research, which first demonstrated the feasibility of magnetic levitation technology, lost funding in 1975 and since that time only German and Japanese government-backed consortiums have pursued the technology (Feder 1989).

PRIVATE ORCHESTRATION OF CONSTRUCTION

In the 19th century private railway firms organised construction with almost no public intervention. Railway entrepreneurs managed construction as they saw fit, often hiring foreign-born labourers and making route and technology decisions as they proceeded. While the United States has yet to see a completed high speed rail project, all of the proposed projects would be supervised by private parties subject to weak federal and state regulation.

The origins of American rail policies

INSTITUTIONAL CAPACITIES

In general, state capacities influenced policy in America by determining that decisions would be made, and action taken, locally. Local governments, state governments, and private entrepreneurs would act independently because state structure situated authority and decision-making power at the local level.

Firstly, state and local governments took the initiative in steam railroad development in large measure because the federal state structure afforded them the authority to do so, and seemed to deny Congress the power to undertake large-scale projects (Callender 1902). Of course, because state capacities in transport were underdeveloped at the federal level, it was unlikely that federal officials would spearhead the railway revolution. In both periods, land grants were promoted to attract private entrepreneurs to government-initiated projects, in part because, with the division of

tax revenues across three levels of government, states had limited capital resources.

Secondly, state and local governments took the lead in organising financing for steam railroads and for high speed trains in part because their capacities to raise funds are great, relative to those of the federal government. Thirdly, private route planning in the United States came about in both periods largely because civil engineers were located in the private sector — a result of the fact that canals and turnpikes were built privately.

On the other hand, by the 20th century, most railway engineers were ostensibly federal employees because they worked for Amtrak and Conrail. In principle, then, the state had the capacity to plan routes and make decisions about rolling stock technology.

Fourthly, for the steam railroads the state left decisions about technology to the private sector in part because the state employed few technical experts and had little experience with transport administration, but again by the 20th century the federal government certainly had adequate technical expertise to take over these tasks.

Finally, the decision to leave construction up to the private sector in both centuries is in large measure a result of America's meagre professionalised bureaucracy and lack of experience in transport administration. Nonetheless, federal experience with the construction of airports and seaports certainly rendered Washington capable of orchestrating the construction of high speed train projects.

Institutionalised cultural meaning

The problem of weak federal state capacities in the 19th century was largely resolved by the 1970s. While the federal government was arguably incapable of orchestrating steam railway development, it seems clear that Washington had the necessary administrative and technical resources to orchestrate high speed train development. I contend that the possibility never entered the political agenda because it was inconsistent with America's political culture.

Firstly, the American conception of states, local governments, and private actors as the appropriate pursuers of collective ends had a palpable effect on public policy in the 20th century, as in the 19th. In the 19th century Congress presumed that transport development was the duty of state and local governments, until the 1850s brought the prospect of trans-continental railroads which were beyond the scope of regional governments. Even then many in Congress challenged the federal government's legitimate authority to provide land grants to stimulate the construction of railroads.

When it came to high speed trains, politicians and federal officials believed in a minimal role for the federal government. Federal Railroad Administrator John Riley envisioned a federal role in which the FRA would merely be "a part in the process of enhancing credibility" of the concept of high speed rail — not the leader in designing and financing high speed trains (quoted in Cupper 1984, p31). In sharp contrast to the French experience, neither congressmen nor federal transport officials thought of the federal government as the appropriate locus of action.

Secondly, the American belief in private-sector rationality, and scepticism about the capacity of the public sector to effect rationality, clearly helped to produce rail policies that located decision authority — over routes, technology, and construction — in the private sector. Railway enthusiasts in both periods argued that market

demand would ensure that lines were properly placed, and that entrepreneurs were better equipped, and motivated, to judge where demand warranted railways than were public officials (US Congress 1987). Moreover, local and private interests have disparaged the idea of federal leadership because they view the federal government as ineffective and cumbersome. As Paul Reistrup, associate chairman of the private High Speed Rail Association and a former Amtrak president, argued:

> **"There is room for some local and state governmental help, but keep the feds out. We don't need their help and we don't need their hindrance. All they do is study, study and study some more. And the whole purpose, of course, is not to do anything. I've been there, and I know."** (Quoted in Wiedrich 1989)

Thirdly, the American belief that the state's proper role in the economy is to provide incentives to business and promote market competition has clearly influenced the decisions to allocate financial responsibility for railroads to the private sector. French analysts, such as TGV rolling stock division chief André Thinières, are perplexed by the American state's reluctance to provide direct aid to railroads:

> **"A key issue working against us in the US is the psychological bias against putting public money in trains. It's quite okay to invest public money in highways and airports, but not in trains."** (Neher 1989)

Despite the fact that the organisational obstacles to providing state and federal aid to transportation projects has been overcome in the cases of sea ports, airports, and highways, Americans react suspiciously to all sorts of proposals to provide public assistance for putatively private projects.

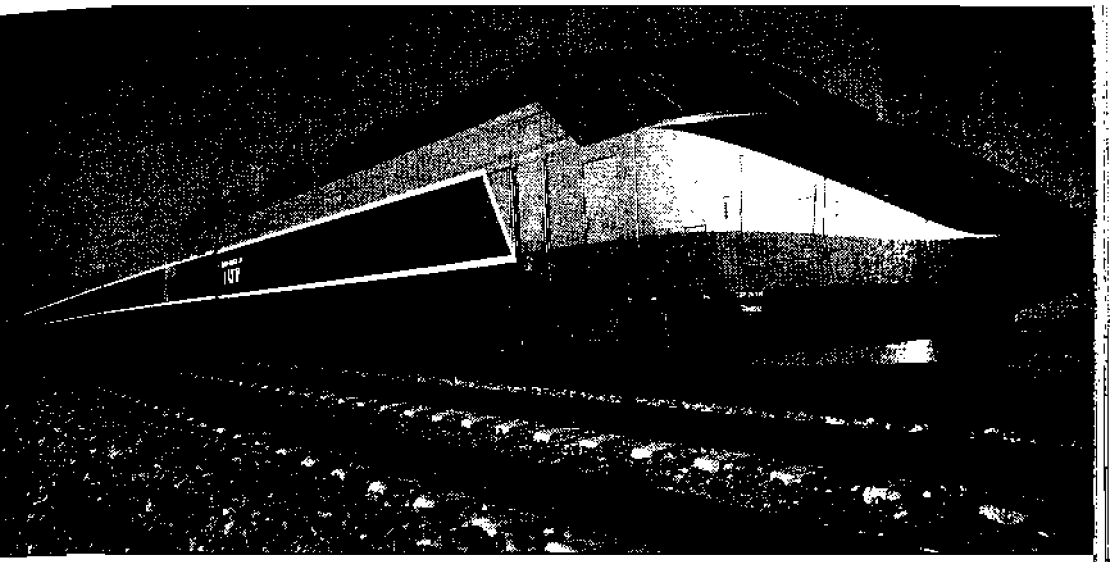
Conclusion

I have been arguing that the dramatically different state strategies for the development of high speed trains found in the United States and France are reminiscent of the railway strategies pursued by 19th century governments in those two nations. While both France and the United States now have public inter-city rail networks, French high speed train development has been initiated, planned, financed, and carried out by the state, while US high speed train development has been relegated to the private sector.

I have suggested that there are two elements to an explanation of why these two countries are now replicating the strategies they used to develop steam railroads. Firstly, the French state has the administrative capacities, broadly defined, to carry out HST development on its own. The state has the fiscal power, the administrative might, the concentration of public authority, and the technical expertise to undertake high speed train development — as it did in the 19th century.

By contrast, in the United States the balance of public administrative might and technical competence favours state and local governments. More broadly, the private sector has had substantial experience in transportation and is thus well equipped to take on the task.

Secondly, and perhaps more importantly, we have seen that alternative strategies for promoting high speed trains never appeared on the political agendas in France or the United States. For all intents and purposes it never occurred to the French that



LA DIFFERENCE: *The TGV is very much a product of French social and political institutions*

they might allow entrepreneurs and markets to determine where and when high speed train systems would be built. Americans never seriously considered the possibility that the federal government might plan and build high speed train lines.

I have argued that this difference can be traced to the experiences of French and US citizens with their particular forms of government. The reality of French government is that the state serves as a collective actor and organises large segments of the economy. The reality is that public policy depicts private parties and state and local governments as the appropriate sources of collective action, and the state relegates decisions about the economy to entrepreneurs and markets. I have referred to those realities as aspects of institutionalised cultural meaning, for they embody national understandings of the nature of collective action, the locus of economic rationality, and the appropriate role of the state in the economy.

Institutionalised meaning tends to create self-fulfilling prophesies, which is one reason why it tends to persist. In the United States, where political culture depicts state intervention in the economy as inefficient, only bankrupt industries are put under state management (Amtrak and Conrail, for example). In turn those industries continue to lose money, fuelling the notion that state industrial management is inefficient.

By contrast, in France, where political culture depicts public industrial management as efficient, the state takes initiatives on new projects that are expected to be profitable, such as the TGV, and takes over successful industries to run them better, such as electronics. Successful experiences then reinforce those strategies.

The aim of this chapter has been to explore, in a preliminary way, the causes of policy continuity within countries. Why is it that American regimes of the 1830s and the 1960s pursued similar strategies for promoting steam railroads and high speed trains? Traditional interest group arguments clearly fail to explain these policy choices. Instead I have tried to sketch out the effects of institutional capacities on where public decision authority is located, and hence where public action is initiated. I have also tried to sketch out the effects of institutionalised cultural meaning on how problems and their solutions are conceptualised in the first place, to suggest that nations choose from among policy alternatives that are narrowly constrained by past experience.

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