Building an Infrastructure for the Automobile System: PIARC and Road Safety (1908-1938)

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Content

- Introduction: background of this research
- Trends in PIARC conferences from 1908 to 1938
- The road safety issue

  -road signalisation

  -traffic fatalities
- Conclusions

Research background

- Ministry of Traffic and Water Management
- Assignment for TU/e, History Department
- Co-author: dr.ir. Ruud Filarski (former head of Research Department AVV)
- Study of seven countries
- Six case studies
- Workshops of international experts
- One book (in Dutch), dozens of scholarly articles (in English)
- Road building is part of two case studies on the emergence of the car (1896-1940) and mass motorisation in an urban setting (1950-2000)

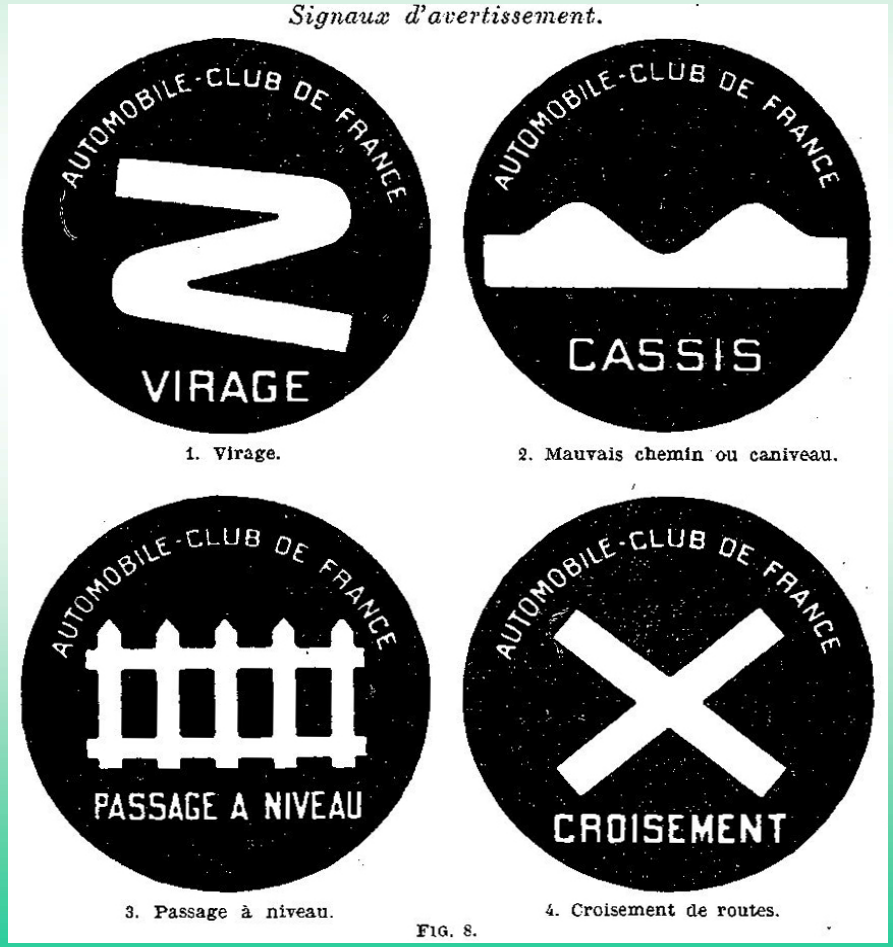
Trends in PIARC conferences from 1908 to 1938

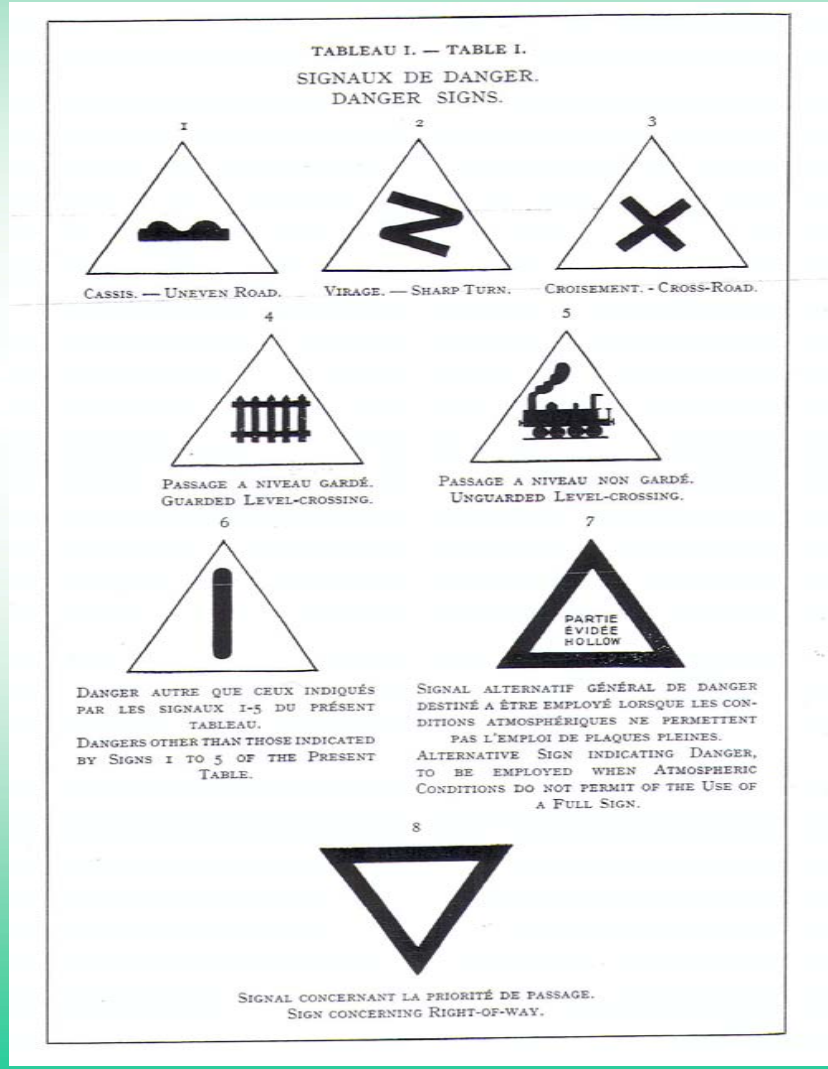
- French initiative modelled after earlier structures (inland navigation)
- As organisational endeavor, very successful
- Main topics: dust, paving, road - vehicle interaction, network architecture, traffic regulation, financing
- Emphasis on technical fix of problems
- Road safety present from the very beginning, but became central in freeway controversy

Year	Location	A	B	C	D	E	F	G	H
1908	Paris	28	2411	1600	UK (279), Germany (191), Belgium (121),	46	107	Fra (40), UK (19), Belg (13), Germ (12), US (9)	The present road; Maintenance; Dust and Wear; The future road; Effects of vehicles upon roads; Effect of roads on vehicles; Road signs; Road transport services
1910	Brussels	32	2118	1200	France (511), Germany (276), UK (160), Austria (113),	71	125	Fra (23), Belg (18), UK (13), Germ (12), US (12), It (11)	Paving technology (incl. dust); Soil foundation; Tramways; Cleansing; Paving type choice; Tracing and lighting; Influence of vehicle weight and speed on roads; Specifications of vehicles; Exploitation of public transport.
1913	London	44	3793	2000	France (610), Germany (286), Belgium (173),	52	149	UK (30); Fra (19); US (19), Germ (17), Austria (14), Russ (13), Hung (10)	New roads; Pavement of bridges; Stone roads with bituminous binders; Wood paving; Lighting of roads and vehicles; Wear detection methods; Traffic regulation; Centralisation and decentralisation of building and maintenance; Financing
1923	Sevilla		1891	600-700	France (495); Spain (375); UK (225); USA (166); Belgium (135)		59	US, Fra, UK, It (all 6); Belgium (5)	Concrete roads; Asphalt roads; Tramway tracks in road surfaces; Development of motorised traffic; Traffic regulation; Congestion.
1926	Milan	55	3429		France (562); UK (410); Poland (174); USA (168) Belgium (142)	75	48	It (12); Fra (6); UK (6); US (6), NL &Swe (5)	Concrete roads; Asphalt roads; Testing of asphalt; Road censuses; Town planning and traffic; Special automobile roads.
1930	Washington	64	3380	1000	France (512); UK (431); Poland (165); Italy (123); Belgium (105);	74	69	USA, France, UK, Germany, Italy (all 6)	Concrete and bricks; Asphalt; Roads in colonies; Financing; Road transport (coordination); Urban traffic regulation.
1934	Munich	52		2100			86	Fra, Austria, Jap, It, Swe, Germ, UK (6); NL, Den, Swi, Siam (4)	Concrete and bituminous materials; Economic pavement construction; Road safety; Mutual influence of vehicles and road; Standardisation and regulation of vehicle weight and dimensions
1938	The Hague	53	3938	2200	UK (648), France (516), Germany (507), USA (186); Poland (158); Belgium (141),	89	93	NL (16); UK (7); Germ, Australia, US, Fra, Swe (6)	Concrete, bricks and bituminous materials;Road accidents; Flow separation; Road surface slipperiness and glare; Sub-soils

A = number of officially represented governments at the conference
B = number of PIARC members
C = number of conference attendants
D = main foreign countries represented among members
E = share of foreign members [%]
F = number of reports
G = countries dominating as source of official reports (number of reports)
H = official questions discussed at the conference (reformulated by this author)

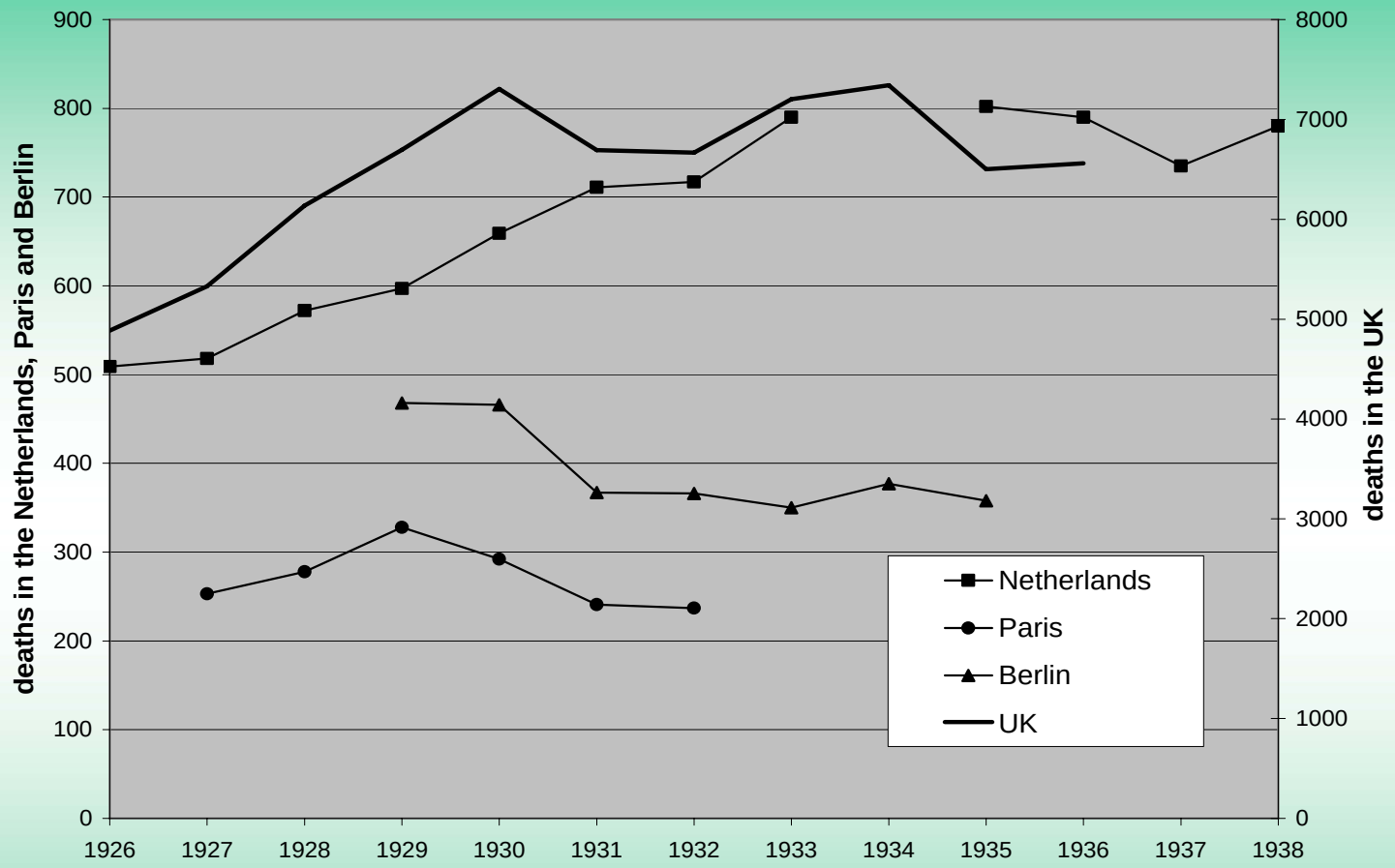
Road safety (1): signs





Road safety (2): accidents

- Accidents and road deaths increased alarmingly, especially among pedestrians and bicyclists
- Urban safety campaigns (in the US) seemed to work, but opinion of urban planners was hardly voiced within PIARC
- Freeway concept was discussed as a safety issue, through the separation of flows



Road safety statistics during the Interbellum
(Source: several reports for the PIARC conferences in Munich, 1934, and The Hague, 1938)

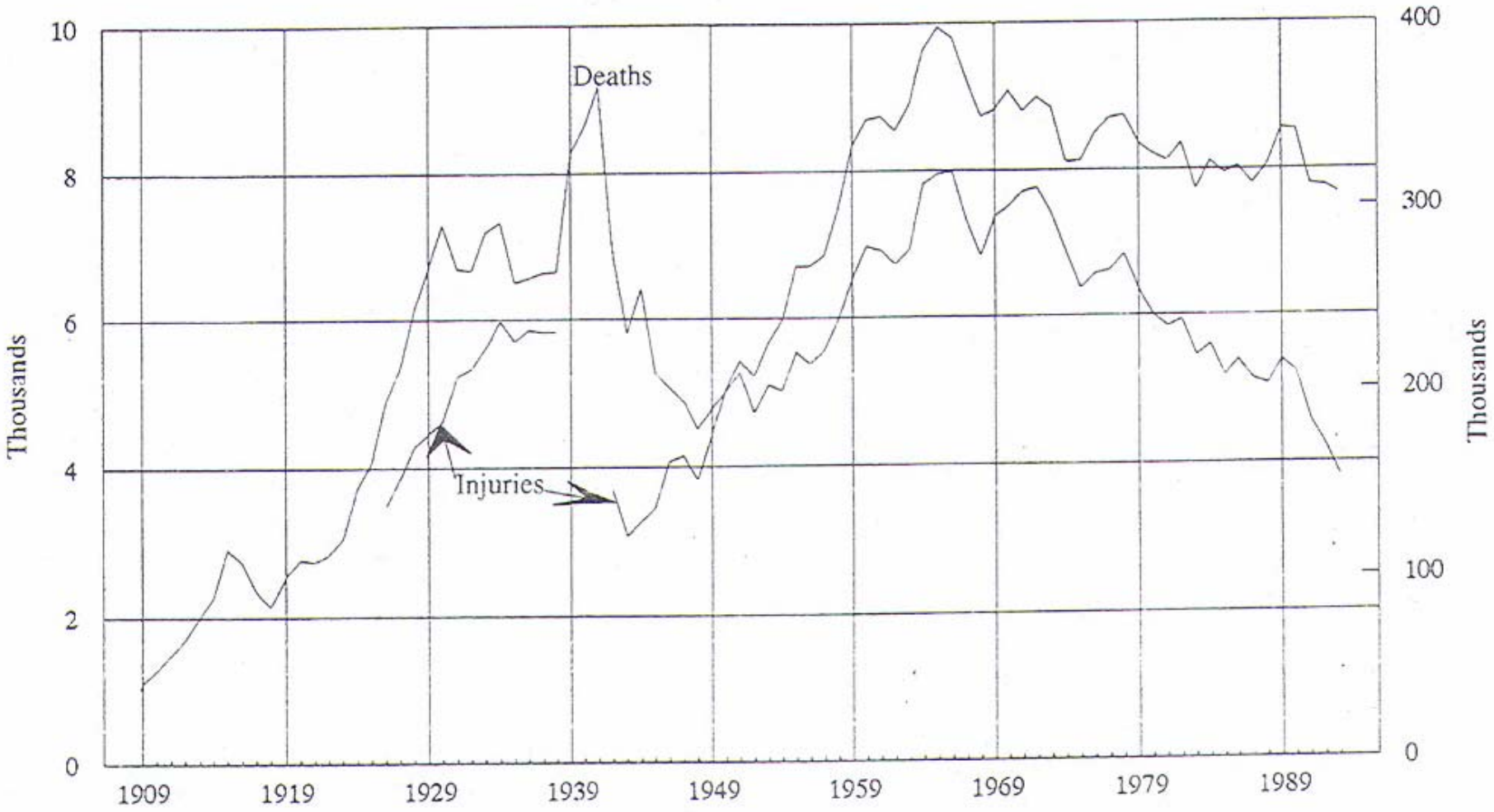
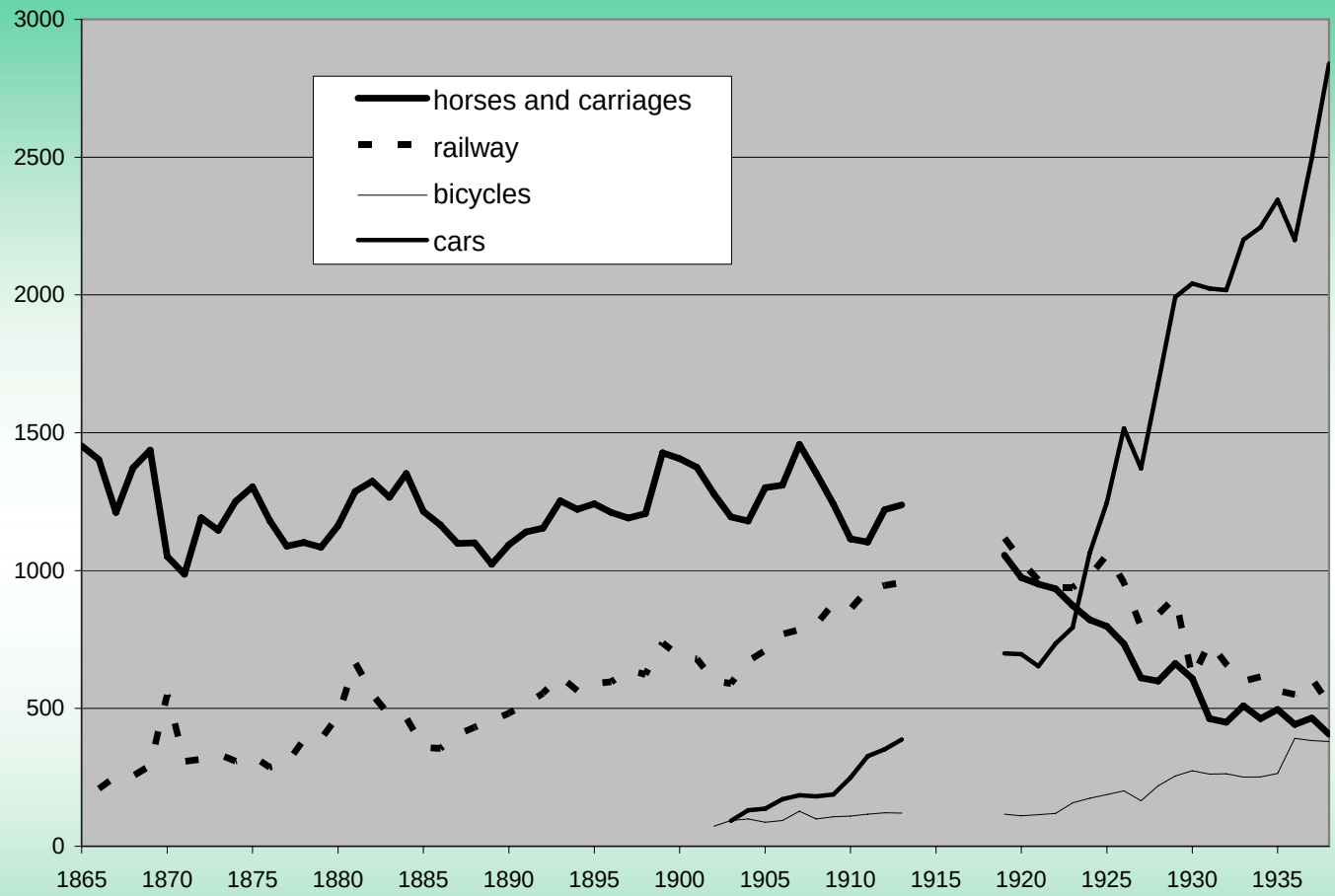
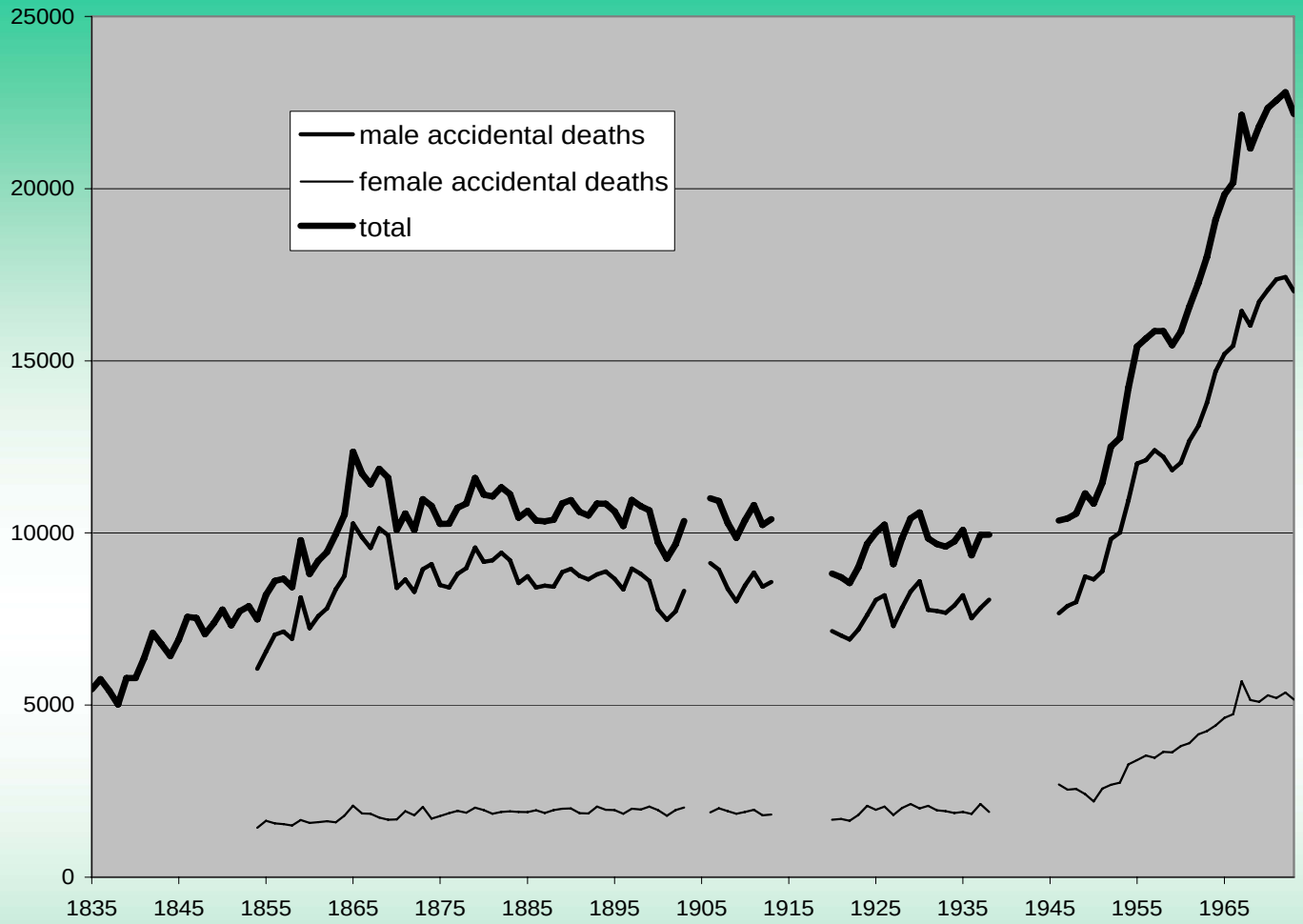


Figure 2.2 Road deaths (left scale) and injuries (right scale) in Great Britain

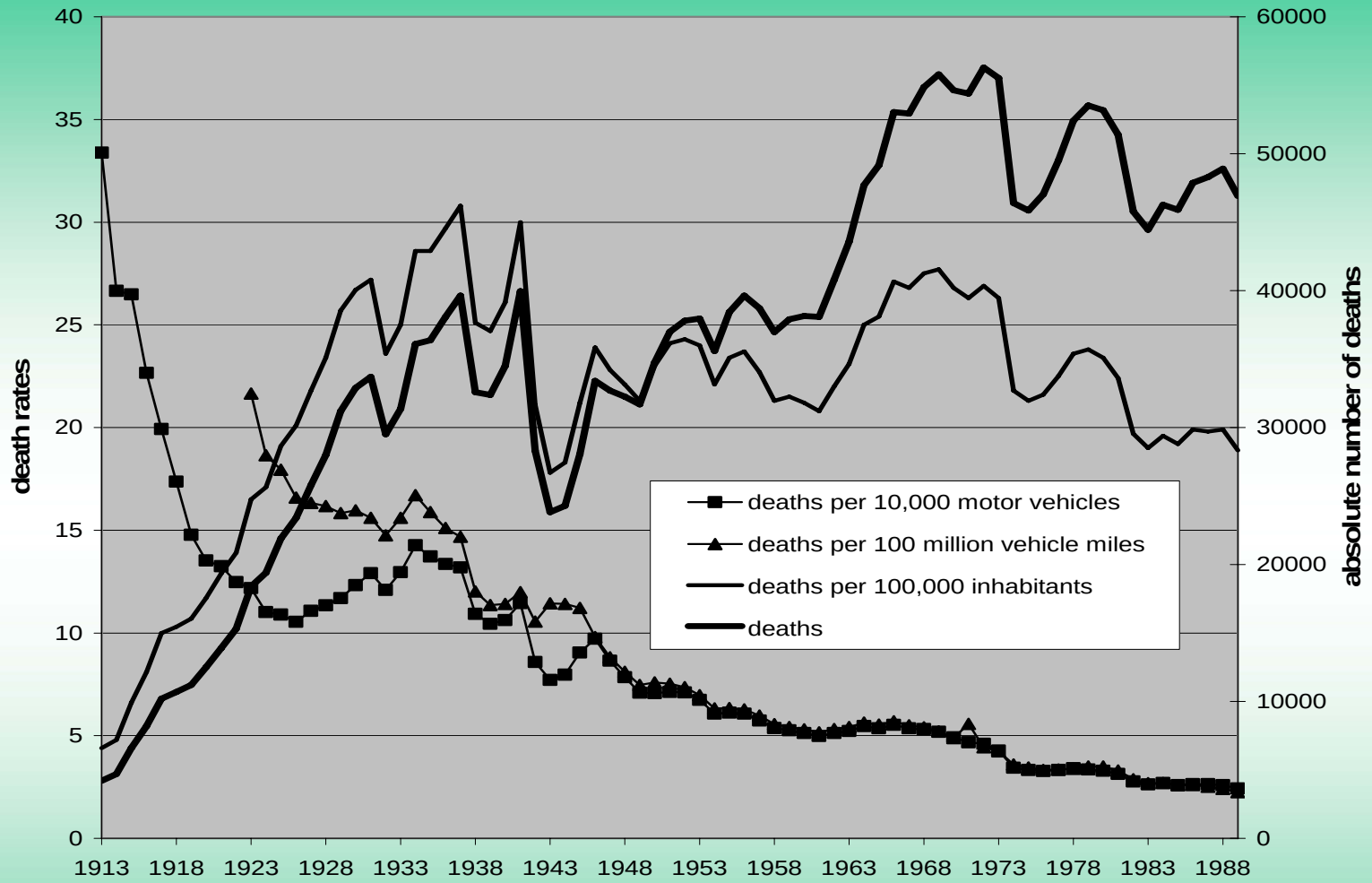


Traffic deaths in France, 1865-1939
(Source: Jean-Claude Chesnais, 'La mortalité par accidents en France depuis 1826,' *Population* (French edition) 29 No. 6 (November – December 1974) 1097-1136)

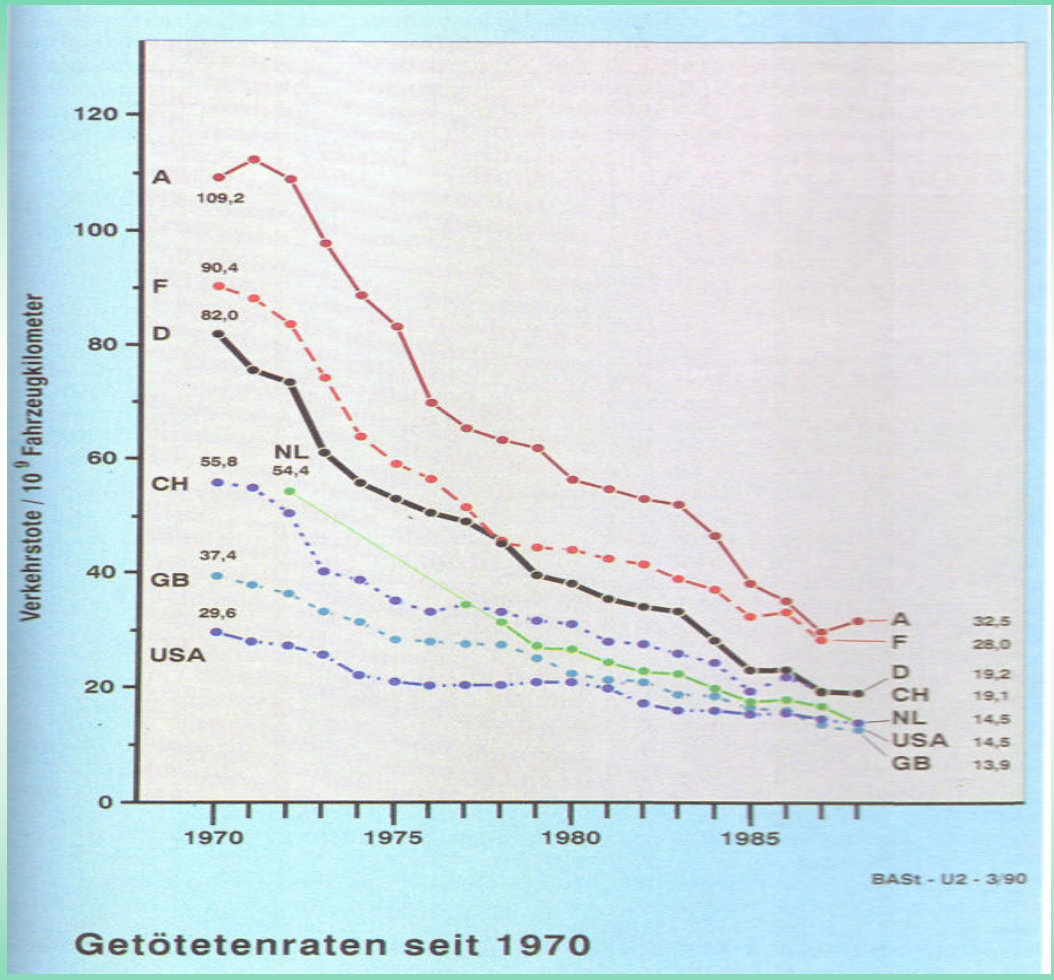


Long-term statistics (1835 – 1973) of French accidental deaths, including gendering (Source: Jean-Claude Chesnais, 'La mortalité par accidents en France depuis 1826,' *Population* (French edition) 29 No. 6 (November – December 1974) 1097-1136)

Source: Hugill (1988)



Mystification of road death statistics by constructing 'death rates'; example: United States, 1913 -1989 (Source: see previous figure)



Getötetenraten seit 1970

Conclusions

- No unification/integration (national sovereignty) but careful consensus formation by presenting exemplary practices
- Standardization on voluntary basis (see League of Nations' Communication and Transit Commission)
- Solutions governed by technocratic paradigm
- Increased traffic safety during inter-war years was a spin-off of separation-of-flows principle, rather than the result of conscious campaign
- Myth creation of increasing safety through statistics
- Road safety in society was conceived as a moral issue (the 'accident-prone driver'), not a technical one