

Hugh Fraser Gunn

Position	Vice President
Nationality	British
Year of Birth	1948

Education

Mathematics, BSc (Hons) University of Edinburgh
Mathematical Statistics (MA) University of Cambridge
Transport Design (Masters) University of Liverpool

Professional Experience

2001 -	Vice President, RAND Europe, Managing Director, RAND Europe Cambridge
2000 – 2001	Corporate Director, RAND Europe, Research Director, RAND Europe Cambridge
1985 - 2000	Managing Director, Hague Consulting Group, The Hague, Paris and Cambridge
1982 - 1985	Senior associate at Cambridge Systematics Europe, The Hague
1978 - 1982	Independent consultant
1978 - 1982	Senior research fellow at Institute for Transport Studies, Leeds
1976 - 1978	Statistical Consultant
1971 - 1974	Statistician with the Government Statistical service

Professional Activities

Fellow, Royal Statistical Society
Fellow, Lincoln Institute for Land-Use Planning
Director, Association for European Transport 1998-1999
Auditor, EEC DGXIII DRIVE Program
Member, Scientific Committee, World Conference on Transport Research
Member, Prize Committee World Conference on Transport Research



Major Studies Undertaken

RAND Europe

EXPEDITE: forecasting of travel by all modes in Europe: for DGTREN, EU. Identification of optimal policies for effecting modal shift from road to rail, from car to public transport. A seminal study in quantifying European policy effects in the area of transportation.

SAMGODS: design study upgrading the Swedish Government's capability to predict the development of national freight demand and to frame effective policies to promote growth in the economy without consequent increase in environmental damage.

Continuing advice to UK Department of Transport on the costs and benefits of providing travel time savings.

Hague Consulting Group

TRACE: elasticity based forecasts of cost impacts in car travel, DGVII; 1998-present.

DYNA: a short-range traffic predictor for European Motorways (for DG XII DRIVE II); 1991 to 1995.

AIUTO: fundamental research into urban traffic forecasting, (for DGVII Fourth Framework); 1996 to 1998.

Induced Traffic: review for DGXI of evidence that infrastructure creates new travel patterns; 1995 to 1996.

The UK Value-of-Travel-Time Studies; 1980 and 1995: establishing the key economic tradeoffs which are used to justify the construction of new roads, or investment in road and rail infrastructure.

The construction and application of the National Travel Demand Forecasting Model for the Netherlands; 1983 to present. The key scientific tool used to inform the debate on road pricing and public transport subsidies

The VFT Feasibility Study: forecasting demand for a high speed rail link between Sydney and Melbourne; 1987 to 1988.

The Netherlands Value of Time Studies: a major investigation into the economic value of travel time savings and losses for input to national and regional evaluation schemes; 1986 and 1997.

Cambridge Systematics Europe



Studies in the UK and the Netherlands on the theory and practice of 'value of time' measurement;

National and regional car ownership forecasting studies;

Projects using 'direct utility' and stated preference methods to forecast travel demand;

The creation of an 'artificial sampling' technique for forecasting applications of disaggregate demand models;

Specific areas of applied and research statistics including survey design, data expansion and model estimation theory for categorical data.

Independent consultant

Retained by the UK Department of Transport to validate of two national-scale models of private and commercial vehicle traffic (the Regional Highways Traffic Model and its successor the National Model), and to develop methods for the statistical appraisal of large scale models of spatial interaction.

Institute for Transport Studies

Responsibility for a project investigating patterns and regularities in consumers' expenditures of time and money on travel;

Specific statistical research and applications included: the development of approximate error measures for multi-parameter log-linear models, survey design, the derivation of 'latent structure' models for quantal response models based on grouped data.



Martin Voorhees Consultants

Supply of general statistical advice to the consultancy, in addition to project management and model development;

Specific responsibilities for the development of new techniques for the estimation of models of national and regional car-ownership, and the implementation of these techniques in the course of a major modelling project at national level;

Organisation and supervision of a study which developed methods of data collection and analysis to relate road traffic accident rates to characteristics of road geometry;

Supply of statistical services including modelling of speed/flow relations, delays at junctions, and the analysis of seasonal variations in traffic flows.

Government Statistical Service

Responsibility within the Ministry of Agriculture for statistical aspects of economic forecasting of agricultural commodities, and for integrating work on the agricultural sector as a whole (as a basis for the determination of levels of subsidy to the sector.).

Responsibility for the presentation of the UK agricultural accounts in input/output format for the UK Central Statistical Office and the Statistical Office of the European Communities, as well as supplying current information and forecasts in response to Parliamentary Questions and for the purposes of official Working Parties.

Publications and Conference Papers

"A disaggregate model of household car ownership" (with J.J. Bates and M. Roberts), Department of the environment, *Research Report 20*, 1978.

"A model of Household Car Ownership" (with J.J. Bates and M. Roberts) *Traffic Engineering and Control*, Dec. 1978 and Jan. 1979.

"Regional Highway Traffic Model : Trip Distribution Investigation" (with H.R. Kirby, J.D. Murchland and J.C. Whittaker) UK *DTp*, 1980.

"Travel Budgets, a review of evidence and modelling implications" *Transportation Research A vol. 15a no.1*, 1981.

"Value of Time Estimation", Institute for Transport Studies, Leeds, working paper 157, 1981.



"The Internal Validation of a National Model of Long Distance Traffic" working paper 164 (with H.R. Kirby, J.D. Murchland). Institute for Transport Studies, The University of Leeds and Department of Transport, 1982.

"Statistical Aspects of Travel Demand Modeling" (with J. Bates), *Transportation Research A* vol. 16a no 5-6, pp. 371-382, 1982.

"Generalised Cost or Generalised Time" a note on the forecasting implications. *Journal of Transport Economics and Policy*, vol. XVII no.1, 1983.

"Statistical Consideration in Fitting Travel Demand Models" (with J.J. Bates), *Transportation Research*, 1983.

"Disaggregate trip distribution models" (with M. Ben Akiva and L. Silman), *Proceedings of the Japanese Society of Civil Engineers*, no.347/IV 1, 1984.

"The analysis of Traffic Accidents" (with P. Vrolijk), *HCG Report 614 01*, produced for Rijkswaterstaat, Netherlands, 1986.

"Applications of Statistical Estimation Methods to Combine Data from Different Sources" (with M. Ben Akiva and P.S. Hsu), *HCG Report 513 01*, produced for Rijkswaterstaat, Netherlands, 1986.

"Een nieuw prognosesysteem voor het personenvervoer in Nederland" (A new forecasting system for personal travel in The Netherlands) (with A.J. Daly) *Verkeerskunde*, Vol.37, pp 512-514, 1986.

"A Regional Model System for the Netherlands" (with M. Gommers, J.P. Jonges and R. Köhler), *PTRC Conference Brighton*, 1991.

"Research into the Value of Travel Time Saving and Losses; The Netherlands 1985 to 1991" *produced for the Nordic Value of Time Seminar in Helsinki*, 1991.

"The Dutch National and Regional Model Systems: Principles, Scope and Applications" (with P. Bovy and J. Jager), *presented at the International Conference on Travel Behaviour*, Lyon, 1992.

"The Netherlands National Model: A Review of Seven Years of Application", *Int. Transp. Opl. Res.*, Vol.1 No.2 pp 125-133, 1993.

"Modelling and Forecasting Car Occupancy" (with A. Daly, G. de Jong, and U. Blom, *presented to International Conference on Travel Behaviour*, Chile, 1994.

"Die Anwendung van Stated-Preference-Untersuchungen zur monetären Bewertung der Reise- und Transportzeiten im Personen und Güterverkehr der Niederlande" (with G.C. de Jong). Paper presented at *Colloquium Veränderungen im Verkehrsverhalten*:



Messung und Modellierung mit den Methoden der direkten Nutzenmessung, Karlsruhe, 1994.

"The opening of the Amsterdam Ring Road" (with A. Daly, T. van der Hoorn, E. Kroes), 1996.

"Les modèles de choix discret et la planification des transports" (with G. de Jong and Y. van de Vyvere) *Géographique in L'Espace*, 1996.

"L'estimation de la valeur marginale du temps en transport: recherche, methodologie, et applications" (with Y. Chen and Yves van de Vyvere) in *Recherche de Transport et Sécurité (52)*, 1996.

"Simulating Delays in Policy Impacts with Equilibrium, Travel Demand Models" paper presented at the 8th *IFAC Symposium on Transport Systems*, Chania, Greece, June 1997.

"Value of Dutch Travel Time Saving in 1997" (with J.G. Tuinenga, Y.H.F. Cheung, H.J. Kleijn) paper presented at the *WCTR 8th World Conference on Transport Research Antwerp*, Belgium 1998.

"AIUTO – Result from the Randstad Test-Side" (with F. Hofman) paper presented at the *WCTR 8th World Conference of Transport Research Antwerp*, Belgium 1998.

"Preparatory research into updating values of travel time in the Netherlands" (with G.C. de Jong, D. Ettema, Y.H.F. Cheung and H.J. Kleijn) paper presented at the *WCTR 8th World Conference of Transport Research Antwerp*, Belgium 1998.

"The AIUTO Project: implementation of time-dynamic assignment at the Randstad test site" (with T. van Vuren, M. Ben-Akiva and F. Hofman) paper presented at the *WCTR 8th World Conference of Transport Research Antwerp*, Belgium 1998.

International Conference on Travel Behaviour

"Cost effective methods for national level demand forecasting" (with A.J. Daly) presented to *Conference on Behavioural Research for Transport Policy*, 1985.

"Model transferability: the potential for increasing cost-effectiveness" (with H. Pol), 1985.

"Long range, Country wide Forecasts of Travel Demand from Model of Individual Choice" (with A.J. Daly) presented to *Fifth International Conference on Travel Behaviour*, Aix-en-Provence, 1987.

"The Use of Travel Demand Model Systems for Assessing Energy and Environmental Policy" (with M.A. Bradley), submitted to the 6th *International Conference on Travel Behaviour*, Quebec, 1991.



Transportation Research Board

"Tests of the scaling approach to transferring disaggregate travel demand models" (with M. Ben Akiva, M. Bradley), 1985.

"A stated preference analysis of Values of Time in the Netherlands." (with M. Bradley) paper presented at the *Transportation Res. Board Annual Meeting*, Washington D.C., 1990.

International Conference on New Survey Methods in Transport

"Expansion of data from mixed random and choice based designs" (with M. Ben Akiva and H. Pol), 1983.

"High Speed Rail Market Projection" (with M. Bradley and D. Hensher) paper for the *3rd International Conference on Survey Methods in Transportation*, Washington D.C., 1990.

Colloquium Vervoersplanologisch Speurwerk (Netherlands)

"Model transfer using data from several sources" (with A. Daly, P. Barkey and H. Pol) presented to *Colloquium Vervoersplanologisch Speurwerk, 1982 and PTRC Summer Annual Meeting*, 1983.

"Model transfer using scaling factors" (with H. Pol), 1984.

"Artificial sample applications for spatial interaction models", 1985.

"Waar komt de groei vandaan? " (with T. van der Hoorn and P. Vrolijk) paper for the *14th Colloquium Vervoersplanologisch Speurwerk*, 1987.

"Implications for Mode Choice Models Based on Value of Time Research" (with J.J. Bates, M. Roberts, M.A. Bradley) discussion note for *the 13th Colloquium Vervoersplanologisch Speurwerk*, 1986.

"SVV/NMP Beleidseffecten in cijfers" (with P. Bovy), 1989.

Planning and Transportation Research Corporation Annual Meetings

"Calibration of gravity models from grouped data" *PTRC Summer Annual Meeting, University of Warwick*, 1977.

"The RHTM car ownership model" with J. Bates and M. Roberts, 1977.



"The RHTM Distribution Investigation" (with M. Kirby, J. Murchland and T. Whittaker) presented at the *PTRC Summer Annual Meeting, University of Warwick*, 1980.

"Travel budgets an analysis into mandatory and discretionary components", 1981.

"Model specification as a source of uncertainty", 1982.

"Estimating Values of Time : an experimental comparison of transfer price methods with the revealed preference approach," (with D. Broom, S. Lowe and P. Jones), 1983.

"Synthetic Samples as a basis for enumeration discrete choice models" (with A. Daly, P. Fisher, and H. Pol) presented to *PTRC Summer Annual Meeting*, 1983.

"Model Transfer using data from several sources" (with A. Daly, P. Barkey and H. Pol), 1983.

"An analysis of transfer price data" Cambridge Systematics U.K. Ltd., 1984.

"The O.V.D. Regional Travel Demand Forecasting System" with H. Pol, 1986.

"The Primary Destination Approach to Modelling Trip Chains" (with R. Antonisse and A.J. Daly), *PTRC Summer Annual Meeting*, 1986.

"Destination Choice Models: design and appraisal" (with M. Ben Akiva and A.J. Daly) presented to *PTRC Summer Annual Meeting*, 1987.

"Applications of the Netherlands National Model to support investigations of Transport Policy" (with A.J. Daly and A. van der Hoorn) presented to *PTRC Summer Annual Meeting*, 1988.

"The Netherlands Value of Travel Time Study: Results and Policy Implications" (with F. Cheung and H. Kleijn), 1989.

"Peak-Period Proportions in Large-Scale Modelling" (with A. Daly, G. Hungerink, E. Kroes and P. Mijjer) presented to *P.T.R.C. 18th Summer Annual Meeting, University of Sussex*, 1990.

"The new regional model, implementation and application" (with M. Gommers, P.H.M. Mijjer and R. Köhler), *PTRC 20th Summer Annual Meeting, University of Manchester*, 1992.

"Carpool Models: Literature and Development in the Netherlands" (with U. Blom and G. de Jong), Proceedings of Seminar G, *PTRC 22nd European Transport Forum, University of Warwick*, 1994.



"A Regional Model of Alsace" (with T. Girard, D. Simmonds, P. Thirion, C. Weiss), 1995.

"The Value of Time in person Travel and Freight Transport: design issues in recent studies" (with R. Sheldon) presented to *PTRC the 23rd European Transport Forum*, 1995.

"A Simulation Method for determining the confidence interval of a weighted group average Value of Time" (with D. Ettema, G. de Jong and K. Lindveld) paper presented to the *25th European Transport Forum*, 1997.

"Estimating base matrices: the combined calibration method" (with P.H. Mijjer and K. Lindveld) paper presented to the *25th European Transport Forum*, 1997.

"The Predictive Power of Operational Demand Models" (with T. v.d. Hoorn) paper presented to the *26th European Transport Conference*, Loughborough University, 1998.

"Antonin: A Forecasting Model for Travel Demand in the Ile de France" (with J.G. Tuinenga, J.F. Allouche, L. Debrincat) paper presented to the *26th European Transport Conference*, Loughborough University, 1998.

"Implications of recent research into Values-of-Time for the classical transport model, forecast and appraisal" (with T.E. Worsley) paper presented to the *European Transport Conference, Cambridge*, Robinson College, 27-29 September 1999.

Other Publications

"An introduction to the valuation of travel time savings and losses (VTTS)", in Hensher, D.A. and Button, K. (eds.) *Transport Modelling*, Handbooks in Transport, Pergamon Press, Oxford, Chapter 27, 2000.

"Models and Methodologies for the Assessment of Innovative Urban Transport Options: the AIUTO project", (with G.N. Bifulco, E. Cascetta, A. Colomi, M.A. Gommers and G. Stagni), 1999.

"Generated Traffic? Some recent evidence on the effects of removing bottlenecks in The Netherlands" (with A. Daly, E.P. Kroes, and A.I.J.M. van der Hoorn), *Transportation, Vol.21*, 1995.

"Disaggregate Travel Demand Models: Applicability for British Transport Planning Practice" (with A. Daly and T. van Vuren), *Traffic Engineering and Control, Vol.36*, No. 6, pp 336-344, June 1995.

"HWYSIM - An Operational Dynamic Route Guidance Model" (with Y. Chen), *26th ISATA*, Aachen/Germany, 1993.

Hugh Fraser Gunn



"The strengths and weaknesses of travel demand model systems for assessing emission reduction policies" (with M.A. Bradley), *The Science of the Total Environment*, 134, pp. 361-370, 1993.

"A Methodology for Investigating the Passenger Demand for High-Speed-Rail" (with J. Brotchie and D.A. Hensher), 1989.