

# Expertise in Regulation and Law

Edited by

GARY EDMOND University of New South Wales, Australia

**ASHGATE** 

#### © Gary Edmond and Contributors 2004

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior permission of the publisher.

Every effort has been made to trace all the copyright holders, but if any have been inadvertently overlooked the publishers will be pleased to make the necessary arrangement at the first opportunity.

Published by

Ashgate Publishing Limited

Gower House

Croft Road Aldershot

Hants GU113HR

England

Ashgate Publishing Company

Suite 420

101 Cherry Street

Burlington, VT 05401-4405

USA

Ashgate website: http://www.ashgate.com

#### **British Library Cataloguing in Publication Data**

Law's Experts Conference (2002 : Canberra, A.C.T.) Expertise in regulation and law. - (Applied legal philosophy) 1. Evidence, Expert - Congresses I. Title II. Edmond, Gary 347'.067

#### Library of Congress Cataloging-in-Publication Data

Expertise in regulation and law / edited by Gary Edmond.

p. cm. -- (Applied legal philosophy)

Includes bibliographical references and index.

ISBN 0-7546-2401-3

1. Administrative law--United States. 2. Evidence, Expert--United States. I. Edmond, Gary. II. Series.

KF5422.E97 2004 342.73'06--dc22

2004057370

ISBN 0754624013

Printed in Great Britain by Antony Rowe Ltd, Chippenham, Wiltshire

## Contributors

John Abraham is Professor of Sociology and Director of the Centre for Research in Health and Medicine (CRHaM) at the University of Sussex. His previous authored books include Science, Politics and the Pharmaceutical Industry (UCL/St Martins Press, 1995); The Therapeutic Nightmare: The battle over the world's most controversial sleeping pill (Earthscan, 1999); and Regulating Medicines in Europe (Routledge, 2000). He is also editor of Regulation of the Pharmaceutical Industry (PalgraveMacmillan, 2003). Address: Dept of Sociology, School of Social Sciences & Cultural Studies, Arts E Building, University of Sussex, Falmer, Brighton BN1 9SN, UK. email: J.W.Abraham@sussex.ac.uk

David S. Caudill is Professor of Law and Alumni Faculty Fellow at Washington and Lee University, where he teaches property, contracts, and legal ethics. His books include *Lacan and the Subject of Law* (Prometheus Books, 1997) and *Disclosing tilt: Law, belief, and criticism* (Free University Press, 1989), and he is co-editor of a volume of essays entitled *Radical Philosophy of Law* (Humanities Press 1994). He has published numerous journal articles in the fields of law and religion, psychoanalytic theory, law and literature, and professional ethics; his recent works are studies of scientific expertise in the courtroom. Address: School of Law — Lewis Hall, Washington and Lee University, Lexington, Virginia 24450, USA. email: CaudillD@wlu.edu

Simon A. Cole is Assistant Professor of Criminology, Law and Society at the University of California, Irvine. He received his AB in History from Princeton University and his PhD in Science and Technology Studies from Cornell University. He specializes in the historical and sociological study of the interaction between science, technology, law and criminal justice. He is the author of Suspect Identities: A History of Fingerprinting and Criminal Identification (Harvard University Press, 2001), which was awarded the 2003 Rachel Carson Prize by the Society for Social Studies of Science. Address: Department of Criminology, Law and Society, School of Social Ecology, 2357 Social Ecology II, University of California, Irvine CA 92697-7080, USA. email: scole@uci.edu

Gary Edmond is a Senior Lecturer in the Faculty of Law at the University of New South Wales. His research interests focus on expert evidence, the public understanding of law and the relations between law and science. He is particularly interested in mass torts, miscarriages of justice and the legal use of social science and humanities research. He originally trained in the history and philosophy of science and subsequently received a law degree from the University of Sydney and a PhD in law from the University of Cambridge. Address: Faculty of Law,

The University of New South Wales, Sydney 2052, Australia. email: g.edmond@unsw.edu.au

Marc A. Eisner is Professor of Government in the Government Department at Wesleyan University. He is the author of several books on regulation, political economy, and American political development. His major publications include Antitrust and the Triumph of Economics (University of North Carolina Press, 1991), Regulatory Politics in Transition (Johns Hopkins University Press, 1993, second edition 2000), The State in the American Political Economy (Prentice Hall, 1995), Contemporary Regulatory Policy (co-author with Jeff Worsham, Evan J. Ringquist and Lynne Rienner, 2000) and From Warfare State to Welfare State (Pennsylvania State University Press, 2000). His current research examines corporate environmental policy and the implications for regulatory reform. Address: Department of Government, John E. Andrus Public Affairs Center, Wesleyan University, Middletown, CT 06459, USA.

email: meisner@wesleyan.edu

Alan Irwin is Professor of Sociology at Brunel University, West London. He is the author of *Risk and the Control of Technology* (Manchester University Press, 1985), *Citizen Science* (Routledge, 1995) and *Sociology and the Environment* (Polity, 2001). He is co-author (with Mike Michael) of *Science, Social Theory and Public Knowledge* (Open University Press, 2003). With Brian Wynne, he co-edited *Misunderstanding Science?* (Cambridge University Press, 1996). Alan Irwin's research interests include sociology of the environment, scientific governance and science-public relations. He is currently studying the relationship between risk understanding and social exclusion. He is also part of a thematic network exploring 'Science, Technology and Governance in Europe' (STAGE). Address: Department of Human Sciences, Brunel University, Uxridge UB8 3PH, UK.

email: Alan.Irwin@brunel.ac.uk

Michael Lynch is Professor in the Department of Science and Technology Studies at Cornell University. He has a background in sociology, and specializes in studies of the organization of day-to-day laboratory practices. He has also studied the organization of courtroom testimony, and is currently studying the intersection of law and science in criminal investigations involving DNA profiling. His publications include *Scientific Practice and Ordinary Action* (Cambridge University Press, 1993), which reviews and critically examines social constructionism in social studies of science, and (with David Bogen), *The Spectacle of History: Speech, Text, and Memory at the Iran-Contra Hearings* (Duke University Press, 1996). Address: Department of Science and Technology Studies, Cornell University, 632 Clark Hall, Ithaca, NY 14853-2401 USA. email: mel27@cornell.edu

**David Mercer** is a Senior Lecturer in the Science, Technology and Society program at the University of Wollongong, Australia. His research interests include

Contributors ix

the interaction of law and science, and public understanding of science and technology. Current projects include an analysis of the 'vertical integration of expertise' in controversial areas of science, discourses of 'risk' in the EMF and mobile telephone debates, and the social history of communication technology. Address: Science, Technology and Society, School of Social Science Media and Communication, University of Wollongong, NSW 2522, Australia.

email: david\_mercer@uow.edu.au

**David Turnbull** is a fellow at Deakin, Melbourne, Monash and Lancaster Universities. His itinerant scholarship is concerned with knowledge and space, indigenous knowledge and databases, weather knowledge, and narratives of prehistory. Address: 591 Canning St, Nth Carlton, Vic 3054, Australia. email turnbull@deakin.edu.au

## **Preface**

The essays in this volume emerged from a conference on expertise sponsored by the ANU and held in Canberra in August 2002. The speakers were invited and each maintains a longstanding research interest in the area. After the conference the papers were reviewed and revised for publication in this collection.

I would like to thank all of those who participated in the *Law's Experts* Conference whether as speakers, respondents, attendees, organizers or sponsors. The following participants presented challenging papers, comments and ideas which helped to refine and clarify some of the issues at the heart of this collection: John Abraham, Rachel Ankeny, John Braithwaite, Chris Bryant, David Caudill, Simon Cole, Tony Connolly, Angus Corbett, Susan Dodds, Marc Eisner, Ian Freckelton, Jeremy Gans, Jane Goodman-Delehunty, Stephen Healy, Keith Houghton, Alan Irwin, Andrew Ligertwood, Mike Lynch, Leighton McDonald, David Mercer, Rosemary Robins, Tim Rowse, Colin Scott, Hugh Selby, Margaret Somerville, Jane Stapleton, David Turnbull and Judy Wajcman.

The international depth of this collection reflects the very generous contribution toward the costs of the Conference provided by the ANU, in particular from the National Institute of Government and Law (NIGL), the Law Program in the Research School of Social Sciences (RSSS) and RegNet. Later, the Faculty of Law at the University of New South Wales provided financial assistance for the final preparation of the manuscript. This enabled Janice Beavan, albeit late in the day, to provide invaluable editorial assistance.

The success of the Conference was in no small part the result of the planning, logistical support and enthusiasm provided by Chris Treadwell, Bronwyn Stuart and Chris Debono.

I would also like to express my special thanks to Jane Stapleton, Peter Cane and John Braithwaite. The Law Program in the Research School of Social Science at the Australian National University provided tremendous stimulation and hospitality during my year in Canberra. Finally, I thank Tom Campbell and Ashgate/Dartmouth.

Gary Edmond

## **Abbreviations**

AAAS American Association for the Advancement of Science

ADR adverse drug reaction

AEBC Agriculture and Environment Biotechnology Commission (UK)

ALF Atlantic Legal Foundation
AMA American Medical Association

BSE bovine spongiform encephalopathy ('mad cow' disease)

CMR Centre for Medicines Research

CNS central nervous system

COMAR Committee on Man and Radiation

DNA deoxyribonucleic acid EBM evidence-based medicine EMF electric and magnetic fields

EMS environmental management systems
EPA Environmental Protection Agency (US)

EWG expert working group

FDA Food and Drug Administration (US)
FOIA Freedom of Information Act (US)
FRE Federal Rules of Evidence (US)

FSE farm scale evaluations

GM genetically modified or genetic modification

HPS history and philosophy of science

ICH International Conference of Technical Requirements for

Registration of Pharmaceuticals for Human Use

ICNIRP International Committee for Non-Ionising Radiation Protection

IEEE Institute of Electrical and Electronics Engineers Inc.

IFAR International Foundation for Art Research

IFPMA International Federation of Pharmaceutical Manufacturers

Associations

IoM Institute of Medicine

JPMA Japanese Pharmaceutical Manufacturers' Association LCGIS London Centre for Governance Innovation and Science

LEO Legal Ethics Opinions
MLP multi-locus probe

NAAQS National Ambient Air Quality Standards (US)

NAS National Academy of Sciences (US)

NDA new drug application

NEPT National Environmental Performance Track (US)

NGO non-governmental organization NRC National Research Council (US)

OMB Office of Management and Budget (US)

OMB-OIRA Office of Management and Budget's Office of Information and

Regulatory Affairs (US)

PCDB Public Consultation on Developments in the Biosciences (UK)

PCR polymerase chain reaction

PDAC Psychopharmacological Advisory Committee (US)

PUS public understanding of science QC/QA quality control/quality assurance

RCEP Royal Commission on Environmental Pollution (UK)

RIA regulatory impact assessments
RF radiofrequency radiation
SLP single-locus probe

SPS Shirley Primary School Trustees
SRS spontaneous reporting system
SSK sociology of scientific knowledge

STR short-tandem repeat

STS science and technology studies or science, technology and society

VNTR variable number tandem repeat WHO World Health Organization

### Cases

Adams v The Queen [1996] 2 Cr App R 467, 163 n30 American Geophysical Union v Texaco Inc. 60 F.3d 911 (2nd Cir. 1994), 216-18 Antevski v Volkswagenwerk Aktiengesellschaft 4 F.3d 537 (7th Cir. 1993), 238 n85 Ashe-Robinson v Secretary of Health and Human Services 1998 WL 994191 (Fed. Cl. 1998), 235 n34 Barefoot v Estelle 463 US 880 (1983), 111, 120 n11 Bartley v Euclid, Inc. 158 F.3d 261 (5th Cir. 1998), 221–2 Berry v City of Detroit 25 F.3d 1342 (6th Cir. 1994), 219–20 Blue Cross and Blue Shield of New Jersey v Phillip Morris, Incorporated 113 F.Supp.2d 345 (E.D.N.Y. 2000), 238 n85 Bolam v Friern Hospital [1957] 1 WLR 582, [1957] 2 All ER 118, 145 Bradley v Brown 42 F.3d 434 (7th Cir. 1994), 222-3, 235 n40 Brock v Merrell Dow Pharmaceuticals, Inc. 874 F2d 307 (5th Cir. 1989), 150, 233 n13 Brock v Merrell Dow Pharmaceuticals, Inc. 884 F.2d 167 (5th Cir. 1989), 150, 233 n13 Brumley v Pfizer, Inc. 200 FRD 596 (S.D.Tex. 2001), 221, 222 Caldwell v Georgia 260 Ga. 278, 393 S.E.2d 436 (1990), 134 n14 Carroll v Otis Elevator Co. 896 F.2d 216 (7th Cir. 1990), 237 n71 Carter v Great American Insurance [1994] WL 374283 (E.D.La. 1994), 222 Chamberlain v The Queen (1983-4) 153 CLR 521, 146-8, 151 Chapman v Luminis Pty Ltd (No 5) [2001] FCA 1106, 179 Christophersen v Allied Signal Corp. 939 F.2d 1106 (5th Cir. 1991) (en banc), 232 n3 Claar v Burlington Northern R. Co. 29 F.3d 499 (9th Cir. 1994), 234 n18 Coe v Commonwealth (1979) 24 ALR 118, 174 Coffin v Orkin Exterminating Co. Inc. 20 F.Supp.2d 107 (D.Me. 1998), 238 n84 Cooper v Carl Nelson & Co. 211 F.3d 1008 (7th Cir. 2000), 194 Cooper v Stuart (1899) 14 AC 286, 172-3 Cummins v Lyle 93 F.3d 362 (7th Cir. 1996), 210–11, 235 n39 Daubert v Merrell Dow Pharmaceuticals, Inc. 951 F.2d 1128 (9th Cir. 1991), 223, 232 n3 Daubert v Merrell Dow Pharmaceuticals, Inc. 509 US 579, 125 L.Ed.2d 469, 113 S. Ct. 2786 (1993), 231 n1, 3, 15-21, 23-4, 26-9, 30 n2, 90, 107-8, 128, 133 n10, 140-5, 150, 162 n13, 197, 198-200, 201-6, 218-20, 231 n1, 232 n4, 233 n10 Daubert v Merrell Dow Pharmaceuticals, Inc. 43 F.3d 1311 (9th Cir. 1995), 31 n4, 162 n15, 209, 221, 235 n36, 237 n75 Delgamuukw v British Columbia 3 SCR 1010 [1997], 165 n51 Delgamuukw v The Queen 79 DLR 185 (1991), 165 n51 DeLuca v Merrell Dow Pharmaceuticals 911 F.2d 941 (3rd Cir. 1990), 164 n45 Edwards v Aguillard 482 US 578, 107 S. Ct. 2573 (1987), 233 n13 Emperor v Abdul Hamid (1905) 101 Ford v Pacific Gas & Electricity Co. 70 Cal.Rptr.2d 359 (1997), 90, 239 n101 Forsham v Califano 587 F.2d 1128 (D.C. Cir. 1978), 215 Freeman v Case Corp. 924 F.Supp. 1456 (W.D.Va. 1996), 235 n42

General Electric Co. v Joiner 522 US 136, L.Ed.2d 508, 118 S. Ct. 512 (1997), 27, 29, 90,

93, 141, 142, 204

Goebel v Denver and Rio Grande Western Railroad Co. 215 F.3d 1083 (10th Cir. 2000), 196 p13

Hall v Baxter Healthcare Corp. 947 F.Supp. 1387 (D.Or. 1996), 234 n18

Harre v A.H. Robins Co. Inc. 750 F.2d 1501 (11th Cir. 1985), recons'd at 866 F.2d 1303 (11th Cir. 1989), 187, 188

Heller v Shaw Industries, Inc. 1997 WL 535163 (E.D. Pa. 1997), 208, 235 n34

Hodges v Secretary of the Department of Health and Human Services 9 F.3d 958 (Fed. Cir. 1993), 237 n73

Hollander v Sandoz Pharmaceuticals Corporation 289 F.3d 1193 (10th Cir. 2002), 220, 237 n78

Hopkins v Dow Corning Corp. 33 F.3d 1116 (9th Cir. 1994), 234 n18

In re Paoli R.R. Yard P.C.B. Litigation 35 F.3d 717 (3rd Cir. 1994), 234 n18

In re Richardson-Merrell, Inc., Bendectin' Products Liability Litigation. MDL 624 F.Supp. 1212 (S.D. Ohio 1985), 164 n45

Jacobellis v Ohio 378 US 184 (1964), 113, 120 n14

Jahn v Equine Services 233 F.3d 382 (6th Cir. 2000), 194

Jansen v Packing Corp. of America 123 F.3d 490 (7th Cir. 1997), 239 n96

Joel Blaz v Michael Reese Hospital Foundation 74 F.Supp.2d 803 (N.D.III. 1999), 215-6

Kay v First Continental Trading, Inc. 1997 WL 614394 (N.D.III. 1997), 237 n73

Kennedy v Southern California Edison Company and Combustion Engineering 219 F.3d 988 (9th Cir. 2000) withdrawn 19 September 2001, 239 n103

Kewanee Oil Company v Bicron Corporation 94 S. Ct. 1879 (1974), 214-15

Krist v Eli Lilly & Co. 897 F.2d 293 (7th Cir. 1990), 237 n71

Kumho Tire Co. v Carmichael 526 US 137, 143 L.Ed.2d 238, 119 S. Ct. 137 (1999), 16, 17, 18–19, 23, 24, 27, 28, 29, 90, 108, 128, 141, 142, 143, 205, 210, 211–12

Lamble v State 114 A. 346 (N.J. 1921), 119 n6

Lauzon v Senco Products, Inc. 270 F.3d 681 (8th Cir. 2001), 237 n75, 238 n87

Lotus Dev Corp. v Paperback Software Intern. 740 F.Supp. 37 (D. Mass. 1990), 236 n58

Lust By and Through Lust v Merrell Dow Pharmaceuticals, Inc. 89 F.3d 594 (9th Cir. 1996), 238 n87

Lynch v Merrell-National Laboratories 830 F.2d 1190 (1st Cir. 1987), 150

Mabo and others v The State of Queensland (No. 2) (1992) 175 CLR 1, 151, 173

March v Stramare (1991) 171 CLR 506, 509, 143, 144, 163 n27

Markman v Westview Instruments, Inc. 52 F.3d 967 (CA Fed. (Pa.) 1995), 207

McLean v Arkansas Board of Education 529 F.Supp. 1255 (D.C. Ark. 1982), 163 n23, 230, 233 n13

McNeil v the Atchison, Topeka and Santa Fe Railway Company 878 F.Supp. 986 (S.D. Tex. 1995), 188

Members of the Yorta Yorta Aboriginal Community v State of Victoria [1998] FCA 1606, 151–3, 158

Members of the Yorta Yorta Aboriginal Community v State of Victoria [2001] FCA 45, 164 n48, 176–8

Members of the Yorta Yorta Aboriginal Community v State of Victoria [2002] HCA 58, 164 n48 Memorandum of Law in Support of Government's Motion for Reconsideration of the Court's Exclusion of Fingerprint Opinion Testimony Cr. No. 98-362 (United States v Llera Plaza, E.D. Pa. 2002), 100–1, 110, 112–13, 128

Mercado v Ahmed 756 F.Supp. 1097 (N.D.III. 1991), 236 n54

Milirrpum v Nabalco Pty Ltd (1971) 17 FLR 141, 164 n50

Moore v Ashland Chemicals, Inc. 126 F.3d 679, 685 (5th Cir. 1997), 211, 235 n44

Muller v Oregon 208 US 412 (1907), 233 n11

Cases xv

National Bank of Commerce (of El Dorado, Arkansas) v Dow Chemical Co. 965 F.Supp. 1490 (E.D. Ark. 1996), 235 n27, 237 n75

National Bank of Commerce (of El Dorado, Arkansas) v Associated Milk Producers, Inc. 22 F.Supp.2d 942 (E.D. Ark. 1998), 235 n27

Naxakis v Western General Hospital (1999) 197 CLR 269, 163 n28

Peabody Coal Co. v McCandless 255 F.3d 465 (7th Cir. 2001), 236 n49, 238 n92

People v Castro 545 N.Y.S.2d 985 (Sup. Ct. 1989), i33

People v Jennings 96 N.E. 1077 (Ill. 1911), 102, 103, 104

People v Jennings, Tr. trans. (Criminal Court of Cook County, Ill. 1910), 103

The People of the State of New York v James Hyatt (2001: 5) 231 n2

The People of the State of California v Orenthal James Simpson, Superior Court of the State of California for the County of Los Angeles, Case No. BA097211 (1995), 126

R v Deen [1994] TLR 11, 133 n8

R v Sodo (1975) 61 Cr App R. 131, 161 n1

Rogers v Secretary of Health and Human Services 2000 WL 1337185 (Fed. Cl. 2000), 235 n34

Rogers v Whitaker (1992) 175 CLR 479, 143, 144-5, 163 n28

Safrani v Werner Co. 1997 WL 729110 (S.D.N.Y. 1997), 238 n87

San Diego Gas and Electric Co. v Covalt 55 Cal. Rptr. 2d 724 (1996), 239 n101

Savage v Union Pacific Railroad Company 67 F.Supp.2d 1021 (E.D. Ark. 1998), 235 n27

Seltsam Pty Ltd v McGuiness (2000) 49 NSWLR 262, 163 n27

Shepherd v R (1990) 170 CLR 573, 165 n61

Shirley Primary School v Telecom Mobile Communications Limited (1998). In the matter of the resource management act 1991 and in the matter of appeal under section 120 of the act between Shirley Primary School (rma 343/96) and Telecom Mobile Communications Limited (rma 429/97), Decision No: C136/98, Environment Court of New Zealand, Judge JR Jackson (presiding), Mrs R Grigg, Ms N Burley, 92–3

Sidaway v Bethlehem Royal Hospital [1985] AC 871, 145

Sierra Club v Ruckelshaus 344 F.Supp. 253 (D.D.C. 1972), 78

Skidmore v Precision Printing and Pkg. Inc. 188 F.3d 606 (5th Cir. 1999), 238 n92

State v Cerciello 90 A. 1112 (N.J. 1914), 119 n6

State of Florida v Tommie Lee Andrews 9th Judicial Circuit, Orange Co., Florida (20 October 1987), 533 So.2d 841 (D.C.A.Fl. 1989), 132 n5

State v Kuhl 175 P. 190 (Nev. 1918), 119 n6

State v Steffen 230 N.W. 536 (Iowa 1930), 104

Stuart v US 797 F.Supp. 800 (C.D.Cal. 1992), 238 n88

Stuart v US 23 F.3d 1483 (9th Cir. 1994), 223-4

Summers v Missouri Pacific Railroad System 132 F.3d 599 (10th Cir. 1997), 222-3

Terran ex rel. Terran v Secretary of Health and Human Services 195 F.3d 1302 (Fed.Cir. 1999), 238 n92

Thorn v Worthing Skating Rink Co. (1877) 6 Ch. D. 415, 165 n54

Treadwell v Dow-United Technologies 970 F.Supp. 974 (M.D.Ala. 1997), 238 n86

Tuf Racing products, Inc. v American Suzuki Motor Corp. 223 F.3d 585 (7th Cir. 2000), 238 n92

US v Alexander 526 F.2d 161 (8th Cir. 1975), 232 n3

US v Baller 519 F.2d 463 (4th Cir. 1975), 232 n3

US v Bonds 12 F.3d 540 (6th Cir. 1993), 209, 235 n33, 235 n36

US v Cline 188 F.Supp.2d 1287 (D. Kan. 2002), 112

US v DiDomenico 985 F.2d 1159 (1st Cir. 1993), 223

US v Director of Illinois Dept. of Corrections 963 F.Supp. 1473 (N.D.Ill. 1997), 236 n55

US v Downing 753 F.2d 1224 (3rd Cir. 1985), 232 n3, 233 n12

US v Frye 293 F. 1013 (D.C. Cir. 1923), 15, 17, 18, 20, 29, 107, 140, 198

US v Galbreth 908 F.Supp. 877 (D.N.M. 1995), 235 n33

```
US v Havvard 117 F.Supp.2d 848 (S.D. Ind. 2000), 110, 112, 113
```

US v Hines 55 F.Supp.2d 62 (D.Mass. 1999), 236 n55

US v Jokobetz 955 F.2d 786 (2nd Cir. 1992), 232 n3

US v Llera Plaza 179 F.Supp.2d 492 (E.D. Pa. 2002), 100, 101, 110, 128

US v Llera Plaza 188 F.Supp.2d 549 (E. D. Pa. 2002), 100-1, 112-13, 128

US v Lowe 954 F.Supp. 401 (D. Mass. 1996), 235 n33

US v Martinez 3 F.3d 1191 (8th Cir. 1993), 235 n33

US v Metzger 778 F.2d 1195 (6th Cir. 1985), 232 n3

US v Mitchell Cr. No. 96–407, Tr. trans. (E.D. Pa. 1999), 112, 128

US v Parks CR-91-358-JSL, Tr. trans. vol. 5 (C.D. Cal. 1991), 105-7

US v Piccinonna 885 F.2d 1529 (11th Cir. 1989), 232 n3

US v Shorter 809 F.2d 54 (D.C. Cir. 1987), 232 n3

US v Smith 776 F.2d 892 (10th Cir. 1985), 232 n3

US v Smith 869 F.2d 348 (7th Cir. 1989), 232 n3, 233 n12

US v Starzecpyzel 880 F.Supp. 1027 (S.D.N.Y. 1995), 211, 237 n73

US v Varoudakis 1998 WL 151238 (D. Mass. 1998), 235 n33

US v Williams 583 F.2d 1194 (2nd Cir. 1978), 233 n12

Vernon v Bosley (No. 2) [1997] 1 PIQR 326, 187-8

Walter v Soo Line Railroad Co. 208 F.3d 581 (7th Cir. 2000), 194

Weisgram v Marley 528 US 440, 120 S. Ct. 1011, 145 L.Ed.2d 958 (2000), 27, 162 n19, 236 n53

Weissmann v Freeman 868 F.2d 1313 (2nd Cir. 1989), 237 n69

The Wik Peoples v State of Queensland (1996) 195 CLR 1, 151

Yarmirr v Northern Territory (No. 2) (1998) 82 FCR 533, 153

Zimmer v Secretary of Health and Human Services 1999 WL 1246937 (Fed.Cl. 1999), 235 n34

## Contents

Contributors Preface Abbreviations Cases		vii x xi xiii
2	Expertise and Experience in the Governance of Science: What is Public Participation for?  Alan Irwin	32
3	Scientific Expertise and Regulatory Decision-making: Standards, Evidential Interpretation and Social Interests in the Pharmaceutical Sector John Abraham	51
4	Protecting the Environment at the Margin: The Role of Economic Analysis in Regulatory Design and Decision-making Marc A. Eisner	67
5	Hyper-experts and the Vertical Integration of Expertise in EMF/RF Litigation  David Mercer	85
6	Jackson Pollock, Judge Pollak, and the Dilemma of Fingerprint Expertise Simon A. Cole	98
7	'Science above all else': The Inversion of Credibility between Forensic DNA Profiling and Fingerprint Evidence Michael Lynch	121

271

Courtrooms David S. Caudill 184

Ethical Dimensions of Law-Science Relations in US

The Invisible Branch: The Authority of Science Studies in

Expertise in Regulation and Law

vi

8

9

10

11

Index

Gary Edmond

David Turnbull

Expert Evidence Jurisprudence Gary Edmond and David Mercer 197 **Bibliography** 243

#### Chapter 1

# Experts and Expertise in Legal and Regulatory Settings

Gary Edmond and David Mercer

#### Introduction

Who is an expert? How is expertise authorized? How are the opinions of one expert to be weighed against those of another? Can experts be trusted? What are the responsibilities of an expert? Are the legal and regulatory demands placed on experts distorting expert practice? How should courts and regulators deal with new technological processes and knowledge claims? What processes or institutional designs will produce the most appropriate forms of expertise? How do we prevent experts from becoming advocates or 'hired guns'? How do our visions of society shape our responses to expertise (and vice versa)? While many of these questions are not new, what binds the contributions to this book is an empirical orientation explicitly sensitive to changing discourses about science and expertise and the emergence of new institutional forms and procedures.

Most of the chapters have been shaped by recent and intense debate over the nature of expertise (see, for example, Turner 2001; Collins and Evans 2002). Renewed interest in expertise seems to have been prompted by a series of crises, public controversies and litigation clusters, many of which are ongoing. 'Mad cow' disease, genetically modified organisms, environmental pollution, the regulation of domestic economies, the efficacy and distribution of pharmaceuticals, recognition of indigenous knowledges, changes in forensic science, institutional reform and the ethical dimensions of expertise have brought expertise to the forefront of contemporary politics, law and regulation. As the subject matter for this collection, these examples provide a clear indication of the continuing significance of experts and expertise in public life. Protracted controversies, unimaginative proposals for reform, the prevalence of polemical concepts such as 'junk science' and impediments to public participation all point toward limitations in much contemporary theory and practice.

Most commentators treat the concepts of *expert* and *expertise* as non-problematic. The concepts are presented as predetermined, temporally and spatially stable, quite often obvious, and even natural. Typically, 'experts' from specific fields, occupations or with special skills—perceived or represented as relevant—are identified and their 'expertise'—whether skills, opinions, authority and so on—invoked, evaluated or criticized. *Problems* tend to arise when experts stray beyond

their *proper* sphere, *misrepresent* their knowledge or experience, *exaggerate* degrees of certitude and *disregard* the standards (or norms) of their field or profession. In contrast, the essays in this text encourage the reader to dispense with some of these commitments in order to direct attention to the roles played by experts and expertise in real world situations.

Questions around what counts as expertise and who is an expert need to be examined in *context*. What ought to be considered as 'context', along with its perceived significance, will vary. It will depend on the stakes involved, the issues being considered, the resources available, the strength of institutional traditions, rules and procedures, the position of institutions in the particular legal or regulatory hierarchy, the audiences, and the interests of experts and those engaging them. What we can suggest is that *expertise has no natural condition*. Definitions of expertise, like the development, mobilization, appropriation and representation of expertise, are always situated, always purposive. That some experts and some forms of expertise appear mundane, institutionally appropriate or uncontroversial should not disguise the historical emergence of different kinds of expertise, the roles of legal and regulatory institutions in the social legitimation of specific kinds of expertise, competition between individual experts or entire fields, and continuing professional and institutional dynamics. Attention to context extends the analytical focus *beyond* the technical content of expertise.

The following essays provide a challenging response to much of the existing literature on expertise in legal and regulatory settings. Each of the studies problematizes the ostensibly orderly operation of legal and regulatory institutions, especially in relation to the roles played by experts and expert knowledge. Each, in its own way, could be read to suggest that attempts to design (or reform) institutions and procedures to produce (non-problematized forms of) objective, neutral, impartial or reliable knowledge might be incorrigible. None of the contributors makes recourse to such simplistic images of expertise, accepts expert rhetorics at 'face value' or adverts to the need for, or possibility of, acquiring more objective knowledge. To suggest that expertise, whether in courts or regulatory agencies, can be reduced to impersonal formulaic expressions trivializes or excludes the social, institutional and political dimensions which underlay the production, management and representation of all expert knowledge. Instead, these essays illustrate the complexity intrinsic to the production and use of expert knowledge during the transition from specialist to other domains—particularly policy formation, regulatory standard-setting and litigation. Consequently, our understanding of the production and use of specialized knowledges and skills is infused at every stage with potential socio-political significance.

The essays might also be read in a way that suggests the need for caution. There may be a need to temper the expectations we place on institutions, procedures, experts and decision-makers. The contributions, therefore, raise important and enduring questions about the shapes of our legal, regulatory and political institutions and the nature and roles of expertise in contemporary democratic societies (see Albury 1983; Ezrahi 1990).