

**THE
BUSINESS OF
TV
PRODUCTION**

Craig Collie

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The Business of TV Production

The Business of TV Production provides an insider's view of television production from initial concept to developing, creating and airing the final program. It outlines the main functions of each of the players involved and the key stages of the production process.

Covering all genres of television – drama and comedy, documentary and current affairs, infotainment and reality TV – it deals with the business side of production and provides context for all aspects of the operation and the challenges of each genre, such as funding, sourcing a creative team, and marketing and distribution.

This book is for all students taking courses in television production and for those in the industry wanting to upgrade their skills.

Craig Collie is a freelance producer and consultant. He has been working in the television industry since 1969, both in production and network management. He has designed the television production curriculums at Queensland University of Technology, and been executive in charge of student production at the Australian Film Television and Radio School (AFTRS).

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Craig Collie



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Contents

Preface *xii*

Diagrams and tables *xv*

Abbreviations *xvii*

Part A Opiate of the people: the television industry 1

Chapter 1 Origins and growth of a global medium 3

- 1.1 John Logie Baird and the race to broadcast 6
- 1.2 America sets the agenda 10
- 1.3 The ideal of public television 14
- 1.4 The coming of cable and satellite 18
- 1.5 Decline of the US networks 19
- Sources and further reading 21

Chapter 2 The digital revolution 23

- 2.1 Freeing up spectrum for auction 24
- 2.2 Benefits of digital broadcasting 26
- 2.3 High-definition television 28
- 2.4 Widescreen picture 29
- 2.5 Multichannelling 30
- 2.6 Enhanced services 33
- 2.7 Interactivity 35
- 2.8 Convergence 36
- Sources and further reading 37

Chapter 3 The industry in Australia 39

- 3.1 Consolidation of a dual system 40
- 3.2 The commercial free-to-air sector 42
- 3.3 The two public broadcasters 45
- 3.4 Changing patterns of programming 49
- 3.5 The third player: pay television 52
- 3.6 The transition to digital television 56

- 3.7 Regulatory and infrastructure changes 57
- Sources and further reading 58

Chapter 4 Television genres 60

- 4.1 Drama 61
- 4.2 Comedy 62
- 4.3 Documentary 64
- 4.4 Current affairs 66
- 4.5 News 66
- 4.6 Sport 67
- 4.7 Infotainment, lifestyle and magazine programs 68
- 4.8 Variety and entertainment 69
- 4.9 Reality programs 70
- 4.10 Music 72
- 4.11 Children's programs 73
- 4.12 Animation 73
- Sources and further reading 75

Part B Message parlour: development and funding of a project 77

Chapter 5 The concept 79

- 5.1 The role of the producer 79
- 5.2 Sources of the concept 82
- 5.3 Is it a good idea and who else thinks so? 83
- 5.4 It's a concept, but is it a program? 84
- 5.5 A market for the program 86
- 5.6 Optioning an existing work 88
- 5.7 The stages of production that follow 89
- Sources and further reading 92

Chapter 6 Development of the project 93

- 6.1 The development team 95
- 6.2 Contract with the development team 96
- 6.3 Chain of Title 97
- 6.4 Fee deferral 99
- 6.5 The development budget 100
- 6.6 Development funding 102
- 6.7 The proposal document 106
- 6.8 Choice of format 111
- 6.9 Estimate of the production budget 112
- 6.10 Pilots 113
- Sources and further reading 115

Chapter 7 Approaches to genre development 116

- 7.1 Drama characters and setting 116
- 7.2 The drama treatment 118
- 7.3 Turning story into screenplay 119
- 7.4 Critical assessment of script drafts 123

7.5	When things aren't working	125
7.6	Documentary development	126
7.7	Program research	128
7.8	Development of reality programs	130
7.9	Other genres	132
	Sources and further reading	133

Chapter 8 The pursuit of funding 134

8.1	Australian free-to-air broadcasters	135
8.2	Australian pay television	139
8.3	Overseas broadcasters	140
8.4	Distribution advance or guarantee	141
8.5	Film Finance Corporation	142
8.6	Other government agency funding	145
8.7	Private investment	148
8.8	Division 10BA and 10B tax deduction schemes	150
8.9	Film-Licensed Investment Companies	152
8.10	Corporate investment	153
8.11	Production funding contracts	155
8.12	Completion guarantee	156
	Sources and further reading	157

Chapter 9 Management of a creative project 158

9.1	The qualities of a producer	159
9.2	Choosing the right team	159
9.3	Production team interaction	160
9.4	The producer-director relationship	161
9.5	The team with a leader	162
9.6	Negotiation skills	164
9.7	Knowing how production works	166
9.8	Networking	167
9.9	Building a business	168
9.10	Ethics	169
9.11	Risk taking and commercial prudence	170
	Sources and further reading	171

Chapter 10 Multi-platform projects 172

10.1	Established merchandising	173
10.2	Online platforms	174
10.3	Mobile (hand-held) platforms	177
10.4	Range of rights	179
	Sources and further reading	179

Chapter 11 Marketing and distribution 181

11.1	Marketing options	182
11.2	Publicity materials	183
11.3	The television marketplace	185
11.4	Marketing beyond television	188
11.5	The video market	189

- 11.6 Rights management 190
- Sources and further reading 191

Part C Riding the tiger: management of the production 193

Chapter 12 Commencement of pre-production 195

- 12.1 Key production personnel 196
- 12.2 The production base 198
- 12.3 Script breakdown 198
- 12.4 Refining the production budget 201
- 12.5 Timing the script 201
- 12.6 Pre-production schedule 202

Chapter 13 Documentation and office systems 204

- 13.1 Office systems 204
- 13.2 Financial organisation 206
- 13.3 Regular reporting 210
- 13.4 Insurance 211
- 13.5 Cast and crew contracts 214
- 13.6 Script amendments 214
- 13.7 Safety Report 215
- 13.8 Daily production paperwork 216
- Sources and further reading 220

Chapter 14 Crew, equipment and facilities 221

- 14.1 Choices of format 221
- 14.2 The camera crew 224
- 14.3 Hiring of crew 227
- 14.4 Audio crew and equipment 228
- 14.5 Lighting and grips 229
- 14.6 Art department 230
- 14.7 Advisors and consultants 234
- Sources and further reading 235

Chapter 15 Casting, rehearsal and performance 236

- 15.1 Types of performers 237
- 15.2 Script breakdown and cast scheduling 238
- 15.3 Casting 241
- 15.4 Stunt performers 243
- 15.5 Casting of children 244
- 15.6 Rehearsals 246
- 15.7 Performance on screen 247
- 15.8 Casting for reality television 249
- 15.9 Casting for documentary 250
- Sources and further reading 251

Chapter 16 Locations 252

- 16.1 Locations and sets 253
- 16.2 The search for locations 254

- 16.3 Authorities to approach 255
- 16.4 Geographical spread 256
- 16.5 The location agreement 257
- 16.6 Location surveys 258
- 16.7 Documentary locations 259
- 16.8 Filming on Indigenous land 260
- Sources and further reading 264

Chapter 17 Travel arrangements 265

- 17.1 Getting there 266
- 17.2 Getting around on location 267
- 17.3 Documentation for overseas travel 268
- 17.4 Accommodation and meals 270
- 17.5 Unfamiliar cultures 272
- 17.6 Minders, fixers and drivers 273
- 17.7 Dangerous assignments 274
- Sources and further reading 276

Chapter 18 Drafting the production budget 277

- 18.1 AFC budget format 278
- 18.2 Story and script 280
- 18.3 Development costs 282
- 18.4 Producers, directors and principal cast 282
- 18.5 Below the Line costs 284
- 18.6 Production fees and salaries 285
- 18.7 Overtime and loadings 286
- 18.8 Fringe calculations 287
- 18.9 Cast 289
- 18.10 Materials costs 291
- 18.11 Location costs 292
- 18.12 Equipment and stores 293
- 18.13 Travel and transport 294
- 18.14 Insurance 296
- 18.15 Post-production 297
- 18.16 Finance and legal 298
- 18.17 Contingency 299
- Sources and further reading 299

Chapter 19 Scheduling the shoot 300

- 19.1 General principles of scheduling 301
- 19.2 Minimising travelling costs 302
- 19.3 Use of a location 303
- 19.4 Wet weather cover 304
- 19.5 Cast considerations 305
- 19.6 Timing of the shoot 306
- 19.7 Updating the schedule 307
- 19.8 Scheduling actuality shoots 308
- Sources and further reading 309

Chapter 20 Preparing studio and outside broadcast productions 310

- 20.1 Layout of the studio 311
- 20.2 The planning stage 312
- 20.3 Consolidation of pre-production 317
- 20.4 Rehearsal 318
- 20.5 Studio guests and live audiences 319
- 20.6 Outside broadcast production 321
 - Sources and further reading 324

Chapter 21 Management of the shoot 325

- 21.1 Monitor progress, deal with the problems 325
- 21.2 Review of footage shot 327
- 21.3 Production safety 327
- 21.4 Impact on the budget 329
 - Sources and further reading 330

Chapter 22 Management of the production budget 331

- 22.1 Some basic accounting principles 332
- 22.2 Cost Reports 335
- 22.3 Offsets 340
- 22.4 Reporting to investors and others 342
 - Sources and further reading 343

Chapter 23 Post-production through to delivery 344

- 23.1 Role of the producer 345
- 23.2 The three historical phases of post-production 346
- 23.3 Linear editing 347
- 23.4 Non-linear editing 348
- 23.5 Archive and other sourced footage 352
- 23.6 Computer-generated effects and animation 353
- 23.7 The art of editing 354
- 23.8 Music 355
- 23.9 Audio post-production 356
- 23.10 Sound aesthetics 357
- 23.11 Editing factual programs 358
- 23.12 Delivery materials 360
 - Sources and further reading 361

Part D A nod to the gatekeepers: the environment of television 363

Chapter 24 Building the television schedule 365

- 24.1 Schedule layout 366
- 24.2 Scheduling influences 370
- 24.3 Audience research 373
- 24.4 Commissioning for the schedule 375
 - Sources and further reading 375

Chapter 25 Legal constraints on content 376

- 25.1 What is copyright? 376

25.2	Rights of copyright owners	380
25.3	Infringement of copyright	382
25.4	Copyright collecting societies	384
25.5	Other aspects of copyright	385
25.6	Confidential information	386
25.7	Defamation	388
25.8	The law of contempt	390
25.9	Offensive material	392
25.10	Classification of television programs	393
25.11	Privacy and trespass	396
	Sources and further reading	397

Chapter 26 Business structure and operation 398

26.1	Sole traders	400
26.2	Private companies	400
26.3	Trust companies	404
26.4	Partnerships	404
26.5	Joint ventures	406
26.6	Setting up an office	407
26.7	The ABN and business name	408
26.8	Goods and services tax	410
26.9	PAYG withholding	411
26.10	The status of workers	412
26.11	Payroll tax	414
26.12	Other taxes	415
26.13	Superannuation	416
26.14	Insurance	416
26.15	The list goes on	417
	Sources and further reading	417

Index 418

Preface

The business of television production is all about creative management and the management of creativity. At its heart lie the conventional canons of good management – financial control, people management, inputs, legal oversight and so on – but overlying this is a need for considerable flexibility. No matter how much market research is done, no-one has any real idea whether a television program will work or not. And production costs are equally unreliable, subject to weather disruption, sulking actors and members of the public who have lost interest in being on camera. It is possibly the only manufacturing industry that conventionally puts a contingency into its production budget.

On the other side of the television coin is the management of the creative process. Sometimes the people are brilliantly and erratically creative, sometimes they are the only people in the world with any regard for their ability. They can be dishonest, backstabbing egomaniacs. Or they can be cool, calm and collected professionals who know exactly how to carry out their craft in a way that adds immeasurably to the quality of the program. They can be the source of lifelong friendships.

The television industry is an industry of paradoxes. Television programs are made, for the most part, for networks that are extraordinarily risk averse, when their own interest is best served by taking risk, and whose commissioning executives often seem to make decisions based on anything but the quality of the program proposal.

So why do people expose themselves to this degree of uncertainty and randomness? Why have I done so for over thirty-five years? Because it is perversely rewarding and because the challenge of steering a production through all the pitfalls that lie in waiting calls on all your accumulated wisdom and experience. You learn how to anticipate many of the traps and to negotiate your way around them. You take a pride in your professionalism.

This book is designed to give the reader an insight into the process of converting a curious idea into an immensely satisfying and, hopefully, successful television program. It is written from the point of view of the producer, the poor fool charged with steering the ship of production through to its destination, and it is an insider's view. The story of the business of television production is the story of the producer. It's as simple as that.

Most tertiary courses in media, communications, film and television – call them what you will – focus on teaching the creative crafts of production: camerawork, editing and, everyone’s aim in the business it seems, directing. I’m not convinced that these areas can be taught to any great extent beyond basic operational skills, and these are often glossed over in favour of more time spent on aesthetics and analysis. With increasing demand for these courses to have greater connection to industry, there is a growing interest in the business side of television production. At the least, this side lends itself to the processes of teaching, although even then it has its limits. There are basic operations and basic knowledge to learn, but ultimately even the business side of television is about judgement and instinct. That cannot be taught. It is partly already there (or not, as the case may be) and partly accumulated through experience. This book is, first and foremost, a textbook at the tertiary education level, but I hope it would serve a useful purpose as well as a primer for those already in the industry who want to upgrade their skills to try their hand at producing.

There are three main aspects to the book, covering the three sets of skills required in the business of production. First, it is about people management and, through the leadership of the production team, maintaining an editorial and creative focus in all the contributing craft skills that are woven into a finished television program. These skills are common to any television production anywhere in the world, the universal qualities required of a television producer. The second aspect is how to determine and obtain the necessary resources to ensure the best possible program will be made for the funds available to it. The most crucial resource is, of course, money. This knowledge is specific to the country in which the program is being made. An Australian production needs to know what resources are available and how they are used in Australia, how the conventions of production work in Australia, and what the industry structure and culture is that prevails in Australia. The third aspect is knowing the steps along the production path from concept to delivery, what the role of each step is, and how it might be modified for the specific needs of each production. A triumvirate of people, resources and process.

This book is not a checklist of the things to do to take a production down some standard pathway. That would be a misrepresentation of the way the profession of production operates. There is no prescription for making a television program. Every program is different. Every production within a particular genre is different from the other productions in that genre, but not as different as from the productions in other genres. There are conventions that are generally useful to follow or adapt as long as they serve the particular needs of the program. Where they don’t, the production process should be amended so it does suit those needs. Each production pathway is planned with a mix of experience and judgement. The guiding principle is: know what is generally done, then do what will work best for the program.

If there’s no one way to make a television program, it’s important that a book such as this doesn’t reflect the experience of just one producer. This is not about my approach to television production, although elements of that are inevitably part of it. I have endeavoured to bring together a consensus of experiences of various participants in the industry with a wide range of approaches. I have tried to weave this aggregated experience through the common narrative of production.

I'd like to particularly note and to thank Sue Murray (Fandango Australia) and Ian Collie (Essential Viewing), who read and gave critical feedback on selected chapters, Peter Herbert (AFTRS) and John Eastway (Eastway Communication), with whom I had several discussions about what being a producer is all about, and for the insights into their particular areas of experience and expertise (in no particular order): Peter Abbott (Freehand Group), Paddy Conroy and Bob Donoghue (Ovation), Fiona Gilroy and Erika Honey (SBS Marketing), Peter George (producer), Paul Vincent (SBS), Tina Braham and Chris Spry (The Lab), David Vadiello (producer), David Goldie (Goldie Media), Ben Cunningham (Austar), Fiona Crago (Beyond Distribution), John Russell (Essential Viewing), and no doubt others I have accidentally overlooked. There are a number of publications whose views I have incorporated into the body of the book. They are listed at the end of chapters. There are also the people I have worked with over the last thirty-five years who have contributed to my growing understanding of the production process and, of course, my family and my wife, Jan, whose support and encouragement have made the task that much easier. Lastly, my thanks to Alan McKee of Queensland University of Technology for suggesting me to Cambridge University Press to write this book, to Cambridge University Press and Jill Henry for their faith, hopefully not misplaced, that I could, and to the editor, Carolyn Pike, for ironing out the bumps and making the book better than it was when I first wrote it.

Diagrams and tables

	<i>page</i>
Figure 2.1 Presentation of 4:3 and 16:9 aspect ratios on incompatible screens.	31
Figure 5.1 Generalised television production pathway from concept to delivery.	91
Figure 6.1 Pathway of program development.	94
Figure 7.1 Sample television drama story outline and scene breakdown.	121
Figure 13.1 Layout of a typical Call Sheet for a television drama.	217
Figure 13.2 Daily Progress Report for a television drama shot on film.	219
Figure 14.1 Camera and sound (field) crews: relationships in documentary production.	225
Figure 14.2 Camera and sound crews: relationships in a drama production.	225
Figure 14.3 Camera and sound crews: relationships in studio or outside broadcast production.	225
Figure 14.4 Structure of the art department in drama production.	231
Figure 15.1 Example of a cast cross-plot.	240
Figure 20.1 Schematic layout of a studio control room.	313
Figure 20.2 Schematic layout of an outside broadcast van.	322
Figure 22.1 Layout of ledgers.	333
Figure 22.2 Sequence of events in entering a transaction in the production ledger.	336
Figure 23.1 Pathway of post-production with non-linear editing.	350
Figure 24.1 Prime time television schedule layout for the ABC (2006).	367
Figure 25.1 Classification zones on Australian FTA television.	394
	<i>page</i>
Table 1.1 Timeline of global development of television technologies.	4
Table 3.1 Ownership of affiliated commercial television stations in Australia.	44
Table 3.2 Share of Australian advertising revenue (2004).	44
Table 3.3 Relative audience and advertising share in commercial television (1993, 2004).	44

Table 3.4	Proportion of Australian content on commercial networks, 1998.	46
Table 3.5	Proportion of Australian content on public broadcasters, 2003–04.	47
Table 3.6	Commercial television comparative program expenditure (2003–04) and hours broadcast (2003).	53
Table 6.1	AFC development program (as at 2005).	103
Table 6.2	Contact details for state funding agencies.	104
Table 8.1	Sources of funding of Australian independent documentary production (2000–2003) and television drama production (2000–2005).	135
Table 13.1	Spreadsheet of production funding cash flow and estimated production expenditure flow.	208
Table 13.2	Workers compensation authorities in Australia.	212
Table 15.1	Authority responsible for employment of children in Australia’s states and territories.	245
Table 15.2	Times of work permitted for children under the NSW Code of Practice.	246
Table 18.1	Overtime and penalty rates in the Motion Picture Production Award.	287
Table 19.1	Scheduling a shoot for turnaround requirements.	304
Table 20.1	Sample running order for studio production.	316
Table 22.1	Typical company balance sheet.	334
Table 22.2	Draft Cost Report in summary form.	338
Table 26.1	Advantages and disadvantages of business structures.	399
Table 26.2	Offices in Australia for registration of a business name.	409
Table 26.3	Factors differentiating employees and contract workers.	414
Table 26.4	Payroll tax exemption thresholds and tax rates in Australia (2005–06).	415

Abbreviations

The following abbreviations are used either in this book or in the television industry generally.

ABA	Australian Broadcasting Authority
ABC	American Broadcasting Company; Australian Broadcasting Commission/Corporation
ABN	Australian Business Number
ACCC	Australian Competition and Consumer Commission
ACMA	Australian Communications and Media Authority
ACN	Australian Company Number
AD	assistant director
ADR	automatic dialogue replacement
A&E	Arts and Entertainment
AFC	Australian Film Commission
AFL	Australian Football League
AFTRS	Australian Film Television and Radio School
AIDC	Australian International Documentary Conference
AMCOS	Australasian Mechanical Copyright Owners' Society Ltd
AP	associate producer
APRA	Australasian Performing Rights Association Ltd
APS	Australian Public Service
ARC	aspect ratio converter
ASDA	Australian Screen Directors Association
ASDACS	Australian Screen Directors Authorship Collecting Society
ASIC	Australian Securities and Investments Commission
ASTRA	Australian Subscription Television and Radio Association
ATA	Admission Temporaire/Temporary Admission
ATF	Asia Television Forum
ATMOSS	Australian Trade Marks Online Search System
ATO	Australian Taxation Office
ATPA	Actors Television Programs Agreement
ATTRA	Australian Television Repeats and Residuals Agreement

ATSC	Advanced Television Standards Committee
AT&T	American Telephone and Telegraph Company
AustLII	Australasian Legal Information Institute
AV	adult violence (classification)
AWA	Amalgamated Wireless Australasia
AWG	Australian Writers' Guild
AWGACS	Australian Writers' Guild Authorship Collecting Society Ltd
BBC	British Broadcasting Corporation
BITC	burnt-in timecode
BNF	basic negotiated fee
BRACS	Broadcasting for Remote Aboriginal Communities Scheme
BSB	British Satellite Broadcasting
C	children (classification)
©	copyright
CAL	Copyright Agency Ltd
CBS	Columbia Broadcasting System
CD-R	compact disk – recordable
CGI	computer-generated imagery
CNN	Cable News Network
CNNN	The Chaser Non-stop News Network
COFDM	Coded Orthogonal Frequency Division Multiplex
CPB	Corporation for Public Broadcasting
CSI	Crime Scene Investigation
CSIRO	Commonwealth Scientific and Industrial Research Organisation
Cth	Commonwealth (of Australia)
CTVA	Commercial Television Australia
CU	close-up
D	day
DA	director's assistant
DAT	digital audio tape
DCable	digital cable
DCITA	Department of Communications, Information Technology and the Arts
DIY	do-it-yourself
DOP	director of photography
dpi	dots per inch
DSat	digital satellite
DTH	direct-to-home
DTT	digital terrestrial television
DV	digital videotape
DVB	digital video broadcasting
DVB-H	digital video broadcasting – hand-held
DVB-T	digital video broadcasting – terrestrial
DV camera	digital video camera
DVD	digital versatile disk
DVE	digital vision effects
DVR	digital video recorder
EDL	edit decision list

EFT	electronic funds transfer
EMI	Electrical and Musical Industries
E&O	errors and omissions (insurance)
EP	executive producer
EPG	Electronic Program Guide
ESPN	Entertainment and Sports Programming Network
Ext.	exterior
FACTS	Federation of Australian Commercial Television Stations
FBT	fringe benefits tax
FCC	Federal Communications Commission
FCP	Final Cut Pro
FFC	Film Finance Corporation Australia Ltd
FLIC	Film-Licensed Investment Company
FPI	film producers' indemnity
FTA	free-to-air
FTO	Film and Television Office (NSW)
FX	effects
G	general (classification)
GDI	General Development Investment
GE	General Electric
GST	goods and services tax
HA	high angle
HBO	Home Box Office
HCA	High Court of Australia
HDTV	high-definition television
HOD	head of department
HUT	households using television
IBA	Independent Broadcasting Authority
IDFA	Amsterdam International Documentary Film Festival
IFB	interruptible foldback (or feedback)
Int.	interior
ITA	Independent Television Authority
ITV	Independent Television
iTV	interactive television
JPEG	Joint Photographic Experts Group
KKR	Kohlberg Kravis Roberts & Co.
LA	low angle
LoI	letter of interest
L-VIS	Live Video Insertion System
M	mature (classification)
MA	mature audience (classification)
MD	mini-disk
M&E	music and effects (sound track)
MEAA	Media, Entertainment and Arts Alliance
MGM	Metro Goldwyn Meyer
MHz	megahertz
MMDS	Multichannel Multipoint Distribution Service
MOU	memorandum of understanding

MPEG	Motion Picture Experts Group
MPPA	Motion Picture Production Award
MS	mid-shot
MTV	Music Television
MYOB	Mind Your Own Business
N	night
NBC	National Broadcasting Company
NGO	non-government organisation
NHK	Nippon Hoso Kyokai (Japan Broadcasting Corporation)
NITV	National Indigenous Television Ltd
NTFO	Northern Territory Film Office
NTSC	National Television Systems Committee
NVOD	near video on demand
OB	outside broadcast
OCG	Office of the Children's Guardian (NSW)
OFLC	Office of Film and Literature Classification
OH&S	occupational health and safety
OMF	open media framework
ORS	Office of State Revenue (NSW)
OzTAM	Australian Television Audience Measurement
P	preschool children (classification)
PA	producer's assistant; public address
PAL	phase alternating line
PAN R	pan right
PAYG	pay as you go
PBL	Publishing and Broadcasting Ltd
PBS	Public Broadcasting Service
PC	personal computer
PDF	portable document format
PFTC	Pacific Film and Television Commission
PG	parental guidance recommended
PIA	Production and Investment Agreement
PILA	Production Investment and Licence Agreement
PLA	Production and Licence Agreement
PMG	Postmaster-General
POC	proof of concept
POV	point of view
PPCA	Phonographic Performance Company of Australia
PPV	pay per view
PUT	people using television
PVI	Princeton Video Images
PVR	personal video recorder
RCA	Radio Corporation of America
R&D	research and development
ROW	rest of the world (sales)
SAFC	South Australian Film Corporation
SBS	Special Broadcasting Service
SDTV	standard-definition digital television

SECAM	Sequential Couleur à Memoire (Sequential Colour with Memory)
SFX	special effects
SingTel	Singapore Telecommunications
SMS	short messaging service
SOT	sound off tape
SPAA	Screen Producers' Association of Australia
STS	Simplified Tax System
TA	travel allowance
TARP	target audience rating point
TBS	Turner Broadcasting Service
Telco	telecommunications company
TEN	The Entertainment Network
TFN	Tax File Number
TIFF	Tagged Image File Format
TP	technical producer
Tx	transmission
UHF	ultra-high frequency
UTS	University of Technology, Sydney
VCR	video cassette recorder
VEA	Video Education Australasia Pty Ltd
VFX	visual effects
VHF	very high frequency
VI\$COPY	Visual Arts Copyright Collecting Society
V/O	voice-over (picture)
VoIP	Voice over Internet Protocol
VOD	video on demand
VR	virtual reality
VSF	Vestigial Sideband Broadcasting
V/T	videotape
WS	wide shot
Z/I	zoom in
Z/O	zoom out
2D	two-dimensional
2S	two-shot
3D	three-dimensional

Part A

**Opiate of the people:
the television industry**

Chapter 1

Origins and growth of a global medium

At 3 pm on 2 November 1936, the British Broadcasting Corporation (BBC) commenced the world's first public 'high-definition' television service with a speech by Britain's Postmaster-General. The program included a five-minute newsreel from British Movietone, Adele Dixon's performance of a song written especially for the occasion, some Chinese jugglers, and Buck and Bubbles, a pair of African American comedy dancers. An hour later the program was broadcast again on a different system. The BBC had installed two incompatible systems, which were to transmit alternately. Within a few months, it would scrap one of them.

Waiting in a BBC corridor was John Logie Baird, a dishevelled Scotsman expecting to be honoured in the opening ceremony, but instead being snubbed by the grandees who participated. Baird, after whom Australia's annual television awards – the Logies – are named, is now regarded widely as the inventor of television or at least the father of television. In fact, he was neither. Evangelical and obstinate, he pursued a dead end in the development of a technology that now owes nothing to the systems he designed.

From this inauspicious beginning developed the most powerful medium of the second half of the twentieth century. Now, in a new millennium, it's not yet clear whether television is going through a period of adjustment or showing the first signs of slow decline. Either way, it draws from and sustains the popular ethos on a mass scale that no other cultural industry has yet been able to approach.

Television is the product of a haphazard series of developments that culminated in that bizarre double act of 1936 and then got shelved while its players were engulfed in war. When it re-emerged after the war, it was in a world so changed that all bets were off. The race would start again.

1.1 John Logie Baird and the race to broadcast

Mechanical and electronic scanning

Television wasn't invented. It developed as a succession of technical advances through two different approaches to the problem of scanning subject matter – one mechanical, the other electronic. In the analogue television system, the camera scans light reflected from the subject and converts it to electrical impulses of varying strengths for transmission to a receiver. The scanning approach that ultimately prevailed was electronic, but unfortunately for John Logie Baird he backed the wrong horse.

The first scanning devices

There was an expectation that image transmission would be possible – George du Maurier's 1878 *Punch* cartoon of a 'telephonoscope', a two-way visual system with parents in London speaking to their daughter in Ceylon, anticipated that – but no-one was sure then how the technology would achieve it. Soon after, two German inventions provided a basis for both mechanical and electronic scanning. In 1884, Paul Nipkow devised a spirally perforated disc with twenty-four small holes through which a strong light was reflected onto a photosensitive selenium cell. Rotation of the Nipkow disc scanned the subject and broke the image into small pieces. The stage was set for competing approaches to television when, thirteen years later, the cathode ray tube was invented by Karl Braun.

The first electronic TV systems

In 1907, Boris Rosing applied for a Russian patent for a television system using a cathode ray tube as receiver. Unaware of the Russian patent, A. A. Campbell-Swinton described his proposed television in *Nature* (1908). Campbell-Swinton replaced the scanning disc with an electronic Braun tube. The image on a photosensitive plate would be bombarded with sweeping electrons and transmitted as electrical impulses. At the receiver, these impulses were to be converted back to a picture on a fluorescent screen. The Scotsman, Campbell-Swinton, never put his system into practice, but the Russian demonstrated his in 1911, producing a distinct image of luminous bands.

Baird's early designs

John Logie Baird was regarded as an 'oddball'. He already had several dubious enterprises under his belt – 'undersocks' that warmed in winter and cooled in summer; chutney and jams from Trinidad, a glass razor, and resin soap – when he began experimenting with the Nipkow disc, even though it had been overtaken by then by the work of Rosing and Campbell-Swinton. Baird was a shy man, with a sense of showmanship, a competitive streak and a passionate belief in the practicality of television. He was not satisfied with just designing a system, he strived for a working model, but reputedly not good with his hands he had to hire people to build his sets for him. After some rudimentary models, Baird moved to

London. Constantly short of money, he seldom ate and never bought new clothes. He was paid, however, for a public demonstration at Selfridge's Department Store, where his images were described as 'faint and often blurred'. Baird's early efforts, then producing only about thirty lines of definition, were elsewhere described as 'a device which only sends shadows' and 'a mere smudge'. His demonstrations promoted an initial public interest in television, but while his mechanical system was struggling, across the Atlantic significant progress was being made with both mechanical and electronic scanners.

Zworykin's all-electric system

A former pupil of Rosing, Vladimir Zworykin had migrated to America in 1919 and four years later filed a US patent for an all-electric television system consisting of a camera tube with photoelectric plate and cathode ray tube receiver. Zworykin built a working system for his employers at Westinghouse Electric, but they were unimpressed and assigned him to other work. Soon after, in Russia in 1926, another former pupil of Rosing, Boris Grabovsky, claimed the first electronic broadcast in Tashkent using Rosing tubes.

Early US mechanical scanning systems

These activities were either unknown to Baird or ignored by him, but he was aware of developments in the United States with mechanical scanners. The American Telephone and Telegraph Co. (AT&T) gave a public demonstration in 1927 of its Bell Laboratories' apparatus using a Nipkow disc. Two broadcasts were received in New York City and watched by an invited audience of business executives, bankers and newspaper editors. One, by wire from Washington DC, included a speech by then Secretary of Commerce, Herbert Hoover, the world's first televised politician. The other was by radio from Whippany in New Jersey and featured comedian A. Dolan. By the next year, eighteen experimental television stations had been licensed in the United States, all using mechanical scanners. A race had started with Britain to be the first country to set up a continuing television service.

Philo T. Farnsworth

What Baird would not have known was that the Radio Corporation of America (RCA) was then secretly testing Zworykin's 'iconoscope', a Braun tube camera that stored the image before scanning, thus requiring much less light on the subject. What also probably escaped Baird's attention at the time was the application in San Francisco by Philo T. Farnsworth for a patent for a camera tube with a photoelectric plate. Farnsworth was twenty-one years old from a poor Idaho farming family, and an avid reader of popular science. By 1929, he and Harry Lubcke had built a television system with all-electric scanning and a synchronising pulse generator. There were no mechanical parts.

Baird takes on the BBC

By then, Baird was absorbed in his competition with Americans who were in his sights. He transmitted pictures of himself, first from London to Glasgow and then from London to New York. Baird's business partner, Captain Oliver Hutchinson, often wrote letters to public officials making demands based on development progress that hadn't happened. They made announcements to the press that were untrue, but drove up share prices in Baird Television Ltd, and they kept cancelling promised demonstrations to Post Office engineers for fourteen months. A great self-publicist, Baird staged many public demonstrations of his system, but night-time test broadcasts from a BBC aerial were stopped by the network's executives. Behind this act was hostility by BBC engineers, who could see limits to the mechanical system. On the other hand, Britain's Post Office engineers were more supportive and pressured the BBC to allow Baird to continue to experiment from the station. With Baird orchestrating outrage in the British popular press and the Postmaster-General (PMG) threatening to issue him with a broadcast licence (Britain had no other radio licensee at that time), the BBC relented and allowed test broadcasts to resume in 1929 during the hours radio was not on air.

Limitations of mechanical scanning

The first live transmission of the Epsom Derby, in 1931, was made with a single camera on the winning post. However, a Baird engineer at the time said, 'You wouldn't be able to tell one horse from another or one jockey from another, but you could at least tell they were horses'. As with mechanical scanning generally, the Baird system was plagued with limitations. In addition to camera immobility, studio recording required on-camera performers to work in a very small, extremely overlit space and there was a distracting flicker in the broadcast picture.

Baird's ill-fated trip to the United States

The space and lighting problems made televised dance programs a fiasco, but Zworykin's iconoscope fixed that and RCA's interlaced scanning solved flicker by dividing the frame into two intermeshed fields. Meanwhile, Baird had been invited to America by radio station owner Donald Flamm. He was to promote and set up a television service, but the federal regulators rejected Flamm's licence application following an RCA objection to a foreign company entering the US television market. In retaliation, Baird wrote to the Prince of Wales complaining that the BBC was giving 'secret encouragement to alien interests'. The English company Electrical and Musical Industries (EMI), 27% owned by RCA, had perfected the RCA/Zworykin system and was applying for a UK patent. Worse, the BBC engineers were showing considerable interest in the EMI system.

EMI system gains support

Experts who saw the EMI system in operation agreed it was far superior to Baird's. Word of this must have got through to Baird as he started looking at alternative scanners. He developed a film scanner that worked on wet film as it emerged

from the developing tank, resulting in a delay of about a minute between camera recording and transmission. He was now aware of Farnsworth's work, which had been demonstrated at the Franklin Institute in Philadelphia. Baird experimented with one of these 'image dissector' electronic cameras, now lagging technically behind the RCA 'charge storage' camera.

The Selsdon Committee

With the rivalry continuing between Baird TV and EMI-Marconi, the BBC and PMG set up a committee under Lord Selsdon to resolve the impasse. In 1935, the Selsdon Committee recommended regular BBC broadcasts as soon as possible, using a minimum 240 line scan and the Baird and EMI systems to broadcast on alternate weeks. The scan line requirement wasn't a problem for EMI-Marconi, whose system was already scanning 405 lines, but Baird's three systems were hard-pressed to scan through 240 lines.

BBC's new TV centre

The BBC converted Alexandra Palace in North London to a television centre with considerable duplication to accommodate the two different systems. A test run at the Radiolympia exhibition in August 1936 had mixed results. Baird's system, operating on the first day with its fixed camera and three types of scanner – Nipkow disc, wet film scanner and Farnsworth tube – suffered breakdowns. EMI's more mobile camera provided trouble-free broadcast the next day. Nonetheless, the service opened three months later with the alternating systems, trumpeted as the world's first 'high-definition' television service. A 405-line system was determined to be 'high definition' so that the German Reichs-Rundfunk-Gesellschaft (RRG) service that was broadcast in 1935 with 180 lines could not steal Britain's thunder. However Britain might define its triumph, the contrast between the EMI-Marconi and Baird systems was obvious from the start. By the end of the month, the Baird workshops burnt down and the following February the BBC dropped the Baird system. John Logie Baird's passion and obsession for fifteen years had come to nothing. He later worked on colour television using cathode ray technology and by 1940 had produced a 600-line colour telecast, but in the war years this went unnoticed. He died in 1946.

The lesson of John Logie Baird

There's a message in the story of John Logie Baird for anyone in the business of television production. Television is a flurry of technological change, fashion and whims of the viewing public. It doesn't stand still for very long. To stay on the front of the wave of change, the television professional must monitor developments as they appear; not necessarily responding to every one – it's an industry full of false dawns and soothsayers – but certainly assessing them and being prepared to pick up on any change that is gaining momentum. Baird, with his single-minded focus on mechanical scanning and its American practitioners, was unable to spot a parallel development that was eventually to prevail and so left himself in a sideshow that television passed by.

First American telecasts

As a footnote, NBC–RCA began making regular test broadcasts from the Empire State Building in 1937, America having lost the race for the first television service. The US service was inaugurated in 1939 at the New York World's Fair, opened by President Roosevelt. The next year, the federal regulator, the Federal Communications Commission (FCC), set up the National Television Systems Committee (NTSC) to determine standards for the service. They decided on a 525 scanning line standard for no reason other than it sat midway between the rival companies, RCA (441 line) and Philco (605 line). In 1941, the Columbia Broadcasting System (CBS) entered the television market and the National Broadcasting Company (NBC) commenced a full commercial service. The commercial approach was to prove critical in the later development of the television industry, but any momentum was lost with the bombing of Pearl Harbor.

1.2 America sets the agenda

TV during World War II

Britain's initial dominance of television would last a mere three years. The BBC closed its television service as soon as war was announced in 1939, cutting off in the middle of a Mickey Mouse cartoon and resuming from the same point in the film when peace was declared in 1945. Domestic sales of television sets were just starting to pick up in the United Kingdom when war broke out. In America, television was wound back after the bombing of Pearl Harbor. Only Germany continued transmission, providing communal television in public rooms. RRG had begun three-day-a-week broadcasts in Berlin in 1935. Because the price of home sets was so high, the German Post Office set up eleven viewing rooms in the capital, which it increased to twenty-eight during the Berlin Olympics. The rooms continued to operate during the war until the Allies bombed the Berlin transmitter in 1943.

Early US regulation

Television in the United States developed along laissez-faire lines as radio had before it. Built and operated by the private sector and supported by advertising, it was regulated to protect the public interest. However, early regulation served mostly to prevent any later shift to higher technical standards. As a result, inferior image resolution and colour quality has characterised American television; but this wouldn't become apparent until much later. RCA engineers had improved Zworykin's tube during the war, developing it for guided missiles and reconnaissance. This image orthicon camera could be used in normal room light and RCA reigned supreme in post-war television.

Origin of US networks

CBS wanted to delay the US frequency-band decision – should it be very high frequency (VHF) or ultra-high frequency (UHF)? – so it could establish a colour

television service to offset its entry into the television market after rival network NBC. CBS's pursuit of a UHF decision slowed set sales so much that the FCC became concerned about a stalled industry and ratified the television service on VHF in 1947. However, VHF could only support twelve channels nationally and three or fewer stations in most cities. Licences were intended to be local, but the system soon centred on the networks, with NBC and CBS dominant. The American Broadcasting Company (ABC) and DuMont were smaller participants. The DuMont stations were reorganised in 1955 as Metromedia, a large independent station group that was eventually purchased in 1985 by Rupert Murdoch as the fourth network, Fox. In the intervening thirty years, the three remaining networks consolidated their grip on the television industry to the exclusion of all others.

Early doubts and rapid growth

There was an early belief that commercial television was not viable. Its use would be limited to one or two hours a day since it demanded the viewer's attention, unlike radio which could play in the background. Television's production costs were thought to be prohibitive and would lead to a loss of sponsors. Concern was expressed about the disruption of family life and eyestrain from prolonged viewing. By September 1947, there were 3000 sets in New York bars, where the viewers preferred sports and news, and 44 000 sets in the homes of the city's high-income families, who preferred drama, although the total audience was about the same in each group. By 1950, an explosion of set sales to middle- and low-income families, 60% of them bought on credit, had changed all that.

Colour starts and stops

The early days of television broadcast were a time of settling in the new technology. The FCC put a freeze on new television channel allocations in 1948 until station-to-station interference could be resolved. No new channels were allocated for four years. Although Vladimir Zworykin had taken out a patent for colour television in 1925, NBC and CBS weren't able to demonstrate rival colour systems until 1946. In 1951, colour transmission began in the United States, but the several million existing black-and-white receivers could not pick up the colour programs, even in black-and-white, and colour sets went blank during black-and-white transmission. Colour transmission was stopped the year it started and didn't begin again until 1953. In 1956 France developed its own SECAM (Sequential Couleur à Memoire, or Sequential Colour with Memory) colour system.

Network power grows

After the war, network public relations campaigns headed off antitrust and regulatory reform and attempted to persuade all and sundry of their sense of public responsibility. Advertisers and networks had a common goal to reach as many people as possible, they argued. That had to be in the public interest.

With rising prosperity, ideological conservatism and the scarcity of VHF licences, the 1950s shaped a business model for network television in America that remained unchallenged until recently. Advertisers, who had been paying for

complete programs, now moved to joint sponsorship. Programs were licensed now by the networks, with advertisers still retaining informal censorship control. Because the market for independent program producers was so small, networks were able to demand a share of ownership and syndication rights. A network licence fee would be less than the program's full production cost and the production company would have to recoup its deficit in domestic and foreign syndication, but that was generally achievable.

Early days of TV drama

Network television had to meet an early economic challenge from Hollywood as well as philosophical doubters and public policy threats. Post-war suburbanisation and the baby boom in America promoted a rise in variety and situation comedy (sitcom). Drama anthology series in the early 1950s had started the careers of many writers, directors and actors – Paddy Chayevsky, Gore Vidal, Sidney Lumet, Arthur Penn and John Frankenheimer; to name just a few of the first two groups – but dramas gave way to quiz shows and episode series (mostly Westerns), and these talented people moved on to movies and the stage. Low-brow programming was a concern with its potential for poor taste, sacrilege and immorality; but the networks headed this off in 1951 with a Television Code.

Networks keep threats at bay

With the success of shows such as *I Love Lucy* and *Dragnet*, filmed programs were preferred to live drama because of the syndication revenue they generated from reruns at home and abroad. The major Hollywood studios began telefilm production while trying to buy into television station ownership. Doubts about the ability of advertising to support network television had underpinned a proposal for pay television, its viability supported by market surveys and test runs. The networks campaigned vigorously against it, arguing at cross-purposes that the public was not interested in pay television and that it would destroy network broadcasting and the US economy. Frank Stanton of CBS railed against attempts to 'hijack the American public into paying for the privilege of looking at its own television sets'. In the end, Hollywood's moves at television ownership were thwarted by the FCC, with the US Department of Justice already targeting their attempts to control movie distribution and cinema ownership. A change of tack in the late 1950s saw multimillion dollar deals make Hollywood backlog movies available to the networks, thus removing the most attractive aspect of pay television. If the networks showed movies, who needed pay television? It wasn't considered again until the late 1970s.

The start of a world market

The US networks were never slow to cloak themselves in patriotism to advance their interests. They advocated the export of the American broadcasting system to counter the threat of the Soviet Union. Britain, France and the USSR were the only other nations with a regular television service by 1950. America began exporting to Brazil, Mexico and Cuba, even though there were few sets in these countries.

As services commenced around the world in the late 1950s, the US networks moved into international program distribution. They were in a powerful position from their ability to extract lucrative syndication rights over programs licensed from independent producers. CBS ceased telefilm production in favour of licensing and syndication, its 1961 annual report referring to 'eliminating the need for highly speculative investment in television pilot films and series'. Let someone else take that risk! By 1960, television was poised to grow dramatically and the US networks were set to flood the market with program content. As *Business Week* commented, 'the bigger TV gets, the more it resembles the American product'.

The beginnings of public TV in America

Public interest concerns were being expressed about unbridled advertising and educators were worried that the educational potential of the medium was being ignored. Instead, content was limited to advertiser information and entertainment. Ford Foundation-funded lobbying led to the establishment of educational channels on the UHF band; but they lacked facilities and funds, being dependent on donations, and suffered poor management with little vision. Few domestic sets had a UHF tuner anyway. The result was a public television system with low funding and political interference in its content.

Political advertising

The first political advertisements in the United States appeared in 1952 when the Democrats bought a half-hour slot for Adlai Stevenson, only to be bombarded with hate mail for interfering with the broadcast of *I Love Lucy*. Eisenhower and his team settled for twenty-second commercial spots and won the election. But the mood was changing in both the nation and network television.

Current affairs TV

The Nixon–Kennedy 'Great Debates' in the 1960 presidential campaign were perceived to have helped Kennedy win, establishing national politics on the television agenda. News images of southern action against civil rights' demonstrators shifted public opinion on that issue and programs featuring African Americans began to appear. By 1977, *Roots* would draw the largest audience ever for an entertainment program. Television portrayal of the Vietnam War helped end the US involvement there, not from any editorial position it took, but from daily news showing the inescapable reality of the war. Protesters against the war adopted the slogan 'The whole world is watching', fully aware of a new power in the living rooms of the nation and the world. Nixon became paranoid about the networks and in 1973 blocked funding to the Public Broadcasting Service (PBS), which had been operating as a network for only three years. A hotbed of liberalism, it was changed to a central distribution body.

Network power shifts

The 1960s ratings race had been dominated by CBS, which specialised in sitcoms and had more star names than NBC, whose focus was on action and adventure. The ABC was perennially third, without notable stars, but with more daring programming (*The Untouchables*, *Bus Stop* and *Peyton Place*) and a following among the young (*Leave it to Beaver* and *The Flintstones*). The networks had been using their market strength to pressure stations, independent producers and program distributors into deals more favourable to the networks: increased air time, equity in shows and network-favouring re-run schedules.

ABC as the new leader

In 1970, new FCC regulations curbed network power and restructured the television market, thus restricting prime time access, ownership of cable systems or programs, and domestic syndication for the networks. The ABC was the main beneficiary of these changes and by 1976 was the frontrunning network, with an advertising mania for young demographics and the star system having lost its power. This might have seemed at the time as a mere leadership change in the network oligopoly and it was; but by the next decade, as the television market became a global phenomenon, the once-mighty American networks began to look increasingly parochial.

1.3 The ideal of public television

Public TV

Public television is not necessarily state television (although it can be), but its existence is certainly guaranteed only by the state. It is broadcasting built on principles of universal service, diversity of programming, and providing for the needs of minority audiences and the cultural and educational enrichment of an informed electorate. It is a lofty ideal, but one that has been difficult to live up to.

The BBC

The paramount public service broadcaster is the BBC, the cornerstone of British television. Widely admired, it has continued since the start of broadcasting, emphasising serious and worthy programming that would elevate the intellectual and aesthetic tastes of its audience. Established in 1927 by a Royal Charter, it was given a wide range of powers and autonomy, although the government reserved to itself seldom-used powers to prohibit material. The broadcaster was to be funded by licence fees on homes with television and radio sets. Its founding director-general, John (later Lord) Reith, proclaimed the purpose of the BBC was the education and moral improvement of the public.

Arrival of ITV

After the triumph of 1936 and the interruption of the war, television was developed unenthusiastically by the BBC until the arrival of Britain's first commercial channel in 1955. Independent Television (ITV) was a group of commercial companies franchised by the Independent Television Authority, a public body much like the BBC's Board of Governors. The new channel exposed BBC Television's high-brow dullness and, as ITV's network expanded, the BBC lost viewers at an alarming rate. Its audience share had fallen to 28% by 1957. But the liveliness of commercial programs provoked a transformation of the BBC into an organisation more reflective of living British culture. The arrival of *That Was the Week That Was* in 1962 shook the British establishment, breaking television and social taboos. Both public and commercial networks did well in the prosperous 1960s, but by the 1970s inflation was working against the BBC, by then with two channels and the cost burden of the introduction of colour and a new transmission system. BBC2 was launched in 1964 on UHF using the 625-line Phase Alternating Line (PAL) system that had been developed in Germany. The two systems – the original 405-line EMI–Marconi standard and the new PAL 625-line – coexisted on BBC1 until the old standard was finally closed in 1985.

Export of the British model

The British public television model spread across Europe and the British Empire in a range of variations, all committed to broadcasting for the public good and funded by licence fees, taxes or some other non-commercial source. Some departed dramatically from this ideal and became the mouthpieces of state power, sometimes being used to support totalitarian political systems. The United States didn't follow the British example, however, and instead set up a public broadcasting service as an alternative to the commercially financed and market-driven system that prevailed there.

Educational TV in America

In 1951, Iowa State College launched WOI, the first television station owned by an educational institution, although it operated commercially. Two years later, the FCC reserved 242 UHF channels for non-commercial educational television after the freeze on new channel allocation. Frieda Hennock, a criminal lawyer from Brooklyn, had become the first woman appointed to the FCC and had championed the educational channel set-aside during the FCC freeze. She found an ally in Walter William Kemmerer, president of the University of Houston. Kemmerer thought tele-courses might solve the problem of the flood of soldiers entering colleges after the war. In 1953, the university signed on the first non-commercial, educational television station, KUHT (now Houston PBS). Others followed in rapid succession, but there was no federal cash support until the mid 1960s and even then it was patchy. Many of the stations struggled. The second station, KTTH in Los Angeles, closed after nine months when its benefactor withdrew support after an argument with the licensee, the University of Southern California.

Public broadcasting in the United States

The *Public Broadcasting Act* of 1967 set up funding through the Corporation for Public Broadcasting (CPB), for public service rather than educational programming, and set up PBS to operate as a network. Tensions between the affiliated stations, between PBS and the CPB, and between PBS and the White House left public television in the United States starved of funds. In 1972, a frustrated President Nixon vetoed a law authorising two-year CPB funding. The business culture of the undernourished PBS changed as a result and funds were increasingly raised through public appeals.

Achievements of US public TV

Despite the continuing difficulties, American public television has produced some effective television, particularly for minority audiences, in the children's (*Sesame Street*) and news (*MacNeil-Lehrer Report*) genres, and with its purchase of quality British programs. Co-productions between US public stations and European producers became a unifier of American and European television cultures, something unimaginable with commercial television.

Threat of the market forces model

By the 1980s, the underlying principles of public television were being called into question in many countries. Public service television was accused by conservative critics of being closed, elitist and inbred. With movement towards a global economy, it was argued that the free market was making educational and cultural programs viable as commercial commodities. Their protection within public broadcasting was no longer deemed necessary. Deregulation as a prerequisite to dissolving international trade barriers was being applied to the communications industry as well as to many others. The shifting climate increasingly favoured an American market forces model over the longstanding public trustee model that had been the backbone of public broadcasting. In any case, the cost of production and distribution of programs was increasing at a time of reduced public spending.

Loss of direction

With a more market-driven perception of audience, European public broadcasters found themselves unable to offer an alternative to profit-driven programming. In 1983 in an article in *Screen*, Nicholas Garnham referred to 'a crisis in imagination – an inability to conceive of an alternative to broadcasting controlled by profit-seeking private capital other than as centralised, bureaucratic, inefficient, arrogantly insensitive to the people's needs, politically subservient to the holders of state power'.

Fresh force of Channel 4

In Britain, Channel 4 was set up in 1982 as a commercial company owned by the regulatory authority, the Independent Broadcasting Authority (IBA), and financed

by advertising revenue and a levy on the commercial companies of ITV. In the wake of a collapse of British cinema, Channel 4 commissioned a new generation of television producers and filmmakers in a curious mix of post-counterculture liberalism and Thatcher-era entrepreneurialism. For the BBC, the Thatcher government considered privatisation and the introduction of advertising, but settled for pressuring it to challenge union power and making demands to bring in new efficiencies.

BBC and the UK government

In the last few decades, the BBC has gone through a succession of political rows with governments of either persuasion. Back in 1985, the Home Secretary, Leon Brittan, had asked the BBC governors to stop the broadcast of an edition of the current affairs program, *Real Lives*, about extremists in Northern Ireland. The Board viewed the program before it went to air and demanded changes. Then in 2003, a report on *Today* suggested the Blair government had 'sexed up' evidence of weapons of mass destruction to justify the war in Iraq. This time the Board rejected the Prime Minister's demands for a retraction, but following the suicide of the source of the BBC's report, the Hutton Inquiry exonerated the government and was critical of the BBC, triggering the resignations of its chairman and director-general.

BBC under attack

By the 1990s, political and public carping about the privileged position of public broadcasters was endemic. Reports exposed bureaucratic bungling, cost overruns and the misuse of funds. Amid demands for improved accountability and the partial dismantling or reorganisation of public broadcasters, and with the pressure of multi-channel competition, the BBC began reducing its staff and outsourcing many of its activities. The *Broadcasting Act 1990* mandated that no less than 25% of BBC programs had to be commissioned from independent producers.

New alliances for public TV

Even though an intellectual counterattack was mounted, pointing to the loss of minority voices and the illusion of unlimited choice in 500-channel cable systems – content analysis revealed program duplication rather than diversity – the tide continued to run against public television. Public broadcasters built new alliances with book publishers, computer software firms and commercial production houses. Surreptitious commercial money was used to underwrite program production and the question was moved from whether public broadcasting would survive to how much it differed from commercial broadcasting anyway.

1.4 The coming of cable and satellite

Origins of cable TV

Cable television began in the United States as a means of transmitting network programs to areas of poor reception. Cable operators proceeded to offer more channels to subscribers, but FCC regulation limited their operation in the big city markets. What money they made was from broadcasting to outlying suburbs. Offsetting that was cable television's growing reputation for high prices and poor quality. The much-touted capacity for interactivity on the channels was constantly deferred.

Cable builds

In 1972, the FCC allowed cable television to enter the top broadcast markets in the cities and pay television began in earnest after Hollywood's failed attempt in the 1950s. Within ten years, homes subscribing to cable television had grown from 6.5 million to twenty-seven million and by 1992 had increased further to fifty-eight million. With the loosening of FCC's restrictions on cable television, Home Box Office (HBO) was launched by Time Inc., and was initially unprofitable. After the success of the satellite transmission of the Ali–Frazier heavyweight titles fight from Manila, HBO started distributing its programs by satellite instead of microwave, and built a market as the price of satellite-receiving dishes fell. Ted Turner obtained a transmission licence in 1976 for the Turner Broadcasting Service (TBS) station, distributed through the same satellite as HBO, and in 1980 launched the twenty-four hour news channel, Cable News Network (CNN).

US pay channels

Thematic subscriber channels have proliferated in pay television, many drawing initially from existing archives, but as they diversified they commissioned programs to fit into the channel brand. Some of the more notable pay channels are listed below.

- Discovery, a documentary channel founded in 1988 and drawing mainly on the BBC archive, is now the world's leading commissioner of documentaries. Its spin-off channels include The Learning Channel and a 1998 joint venture with BBC (Animal Planet, People & Arts, BBC America).
- Arts & Entertainment (A&E), part-owned by NBC, first used existing archives, but now commissions programs as well. It has spun off The History Channel and The Biography Channel.
- BBC has a joint venture with Flextech PLC for factual channels under the UKTV brand.
- Canal+, a French channel, has invested in a group of documentary channels called Multithématiques, along with TCI, Havas and others.
- CNN has added a range of sub-niche versions to its original all-news network.
- Cartoon Network, created by Ted Turner and now owned by Time Warner, initially depended on the MGM library, but now commissions its own animation, especially from the European studios.

Building a business structure

The struggle to get a business footing for pay television generated a range of financing and merchandising structures. No longer did movies simply go to television three years after cinema release. Now they went through a succession of releases – airline, video/DVD rental and sell-through, pay-per-view (PPV) and subscription television – to maximise their return before reaching the networks at the end of the line. Licensing and merchandising products associated with television programs were often so profitable that a program might be marketed under value because television exposure would bring a higher return from ancillary rights. Sport became the main driver of subscription television, with a bidding competition that has created the high price now asked for live sports events.

The European experience

European broadcasters tried cable with Sky Channel first in 1982 and The Entertainment Network (TEN) two years later. TEN became Mirrorvision, then Premiere and closed in 1989. Sky and SuperChannel struggled. Sky launched as a satellite television channel later in 1982, but by 1988 had lost £39 million. All found young viewers, although not enough to satisfy advertisers. However, a corner was turned in 1988 when a Luxembourg consortium launched the *Astra 1A* satellite with a mix of English and German programs delivered to roof-top dishes. The next year, Rupert Murdoch's News International launched four Sky channels and, a year later, British Satellite Broadcasting (BSB) began after technical delays and high spending. In the battle for UK viewers, Sky lost £95 million in its first year alongside its £121 million start-up cost. BSB's losses were even higher and at the end of 1990 the two competitors merged as BSkyB. The new broadcasting entity didn't look back.

The threat to free-to-air networks

As the number of US cable channels grew (by 1999 there were more than 200 niche channels in America) they ate into the audiences of the three major networks. UK cable penetration was much lower, but BSkyB's satellite service had forty channels and European free-to-air (FTA) networks were losing audience as multichannel television built its audience. European subscribers grew in the 1990s so that by 1997 cable and satellite television accounted for 12% of all viewing in the United Kingdom and subscriber television accounted for 60% of German viewing.

1.5 Decline of the US networks

Management woes of CBS and NBC

The 1970s had been a decade of management problems for the two former dominant American networks. CBS had a succession of bad chief executive officers with no television experience and NBC wooed Fred Silverman from the ABC with disastrous results. Silverman had been instrumental in the ABC's climb to the top, but was unable to repeat that success. Japanese imports were already killing off

television set sales of NBC's subsidiary, RCA. Grant Tinker was appointed chief executive officer of NBC in 1981 and in five years it was back on top through a judicious choice of executives and programs.

Network ownership changes

Cable television produced the first real challenge to the networks with HBO, followed by Rupert Murdoch in 1985 with Fox. CNN became the fourth news force, especially after its coverage of the 1991 Gulf War. While Murdoch was launching Fox, all the original networks were undergoing takeovers: ABC (including its cable networks ESPN, A&E and Lifeline) by Capital Cities for half its valued price; NBC by General Electric, which then shut down RCA and NBC Radio; and struggling CBS by corporate raider, Laurence Tisch. All cut payrolls and reduced perks, but to no avail in the face of competition from cable and Fox, video rentals and emerging satellite services to homes.

Cable erodes network audience share

In 1993, the FCC allowed the networks to produce and own programs again. Two years later, CBS was sold to Westinghouse. Another year on, Disney bought the ABC. Warner Brothers and Paramount bought stations to create small networks for digital television, but with a fragmenting market and the convergence of television and computers, the days of the all-powerful American networks had passed. The three major networks, which held 93% of the prime time audience in 1977, found their share reduced to 49% by 1996, eroded by the increasing number of cable channels and by new non-cable channels, such as those with Fox, United Paramount or Warner Brothers, and the Spanish-language broadcasters, Telemundo and Univision.

World dominance of US television

The world television audience had grown from eighty million in 1970 to 500 million in 1988, by which time the United States was spending one-third of the world's total program expenditure with less than 5% of the global audience. The extended period of profitable stability for networks from the 1950s to the 1990s was the result of the marginalisation of public television, an absence of foreign programming in the United States and the high proportion of the American gross national product spent on advertising. In 1983, the United States imported only 2% of its programs and this one-way trade provided a conspicuous international profile for American television. Although the US dominance of world export markets was faltering by the early 1990s, media exports were still high and helping drive demand for mass consumer goods, such as *Ninja Turtles*, *Coke* and *Big Macs*.

The US industry globalised

The political and economic crisis of the 1990s resulted in a reconfiguration of institutions and audience in the three-network oligopoly in America and public

television in Europe. Television became more global with delivery by cable and satellite, consolidation of the telecommunications and computer industries, a trend towards deregulation and the appearance of new transnational entrepreneurs. Foreign-based multinationals, especially Japanese companies, were making significant purchases of US media producers. By the early 1990s, four of the eight major movie studios and four of the five major record labels were in foreign hands.

The new global market

The US domestic box office was giving way to the international market. Typically, a Hollywood film had earned 80% of its revenue at the US box office, but by 1990 it had fallen to only 30%. Studio management had to focus on home video and foreign box office demands for their three essentials of star, action and special effects. *Fortune* magazine referred to a 'one-world, pop-tech civilization' and Bill Roedy, chief executive officer of MTV Europe, observed: 'An 18-year-old in Denmark has more in common with an 18-year-old in France than either has with elders in their own country'. With the new fickle multichannel viewer, long-held constructs of audience by both commercial and public television in the United States and elsewhere were now undermined. Even America was complaining that the cost of the demands of the new global market was a diminishing of the American television culture. In fact, it was out with the old technology and in with the new. The digital revolution had started and it was revolutionary, not necessarily bringing in a new era but it did bring a new uncertainty.

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