

They're
rigged

They're
addictive

They're
everywhere

KA-CHING!

POKIE NATION

LOOKING GLASS PICTURES® PRESENTS A FILM PRODUCED BY NEIL LAWRENCE AND MITZI GOLDMAN DIRECTED BY JANE MANNING EDITED BY ANDREA LANG CINEMATOGRAPHY BY PETER COLEMAN AND JUSTIN BRICKLE
SOUND BY MARK BLACKWELL SOUND DESIGN BY SAM PETTY MUSIC BY JONATHAN ZWARTZ LINE PRODUCED BY MERRAN LANG © KA-CHING! KA-CHING! PTY LTD 2015



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Logline

The Pokies. They're rigged, they're addictive, and they're everywhere.

Program description

The Pokies. They're addictive, and they're everywhere. But does the problem lie with the individual or the machine? *Ka-Ching!* goes inside the machine to find out, speaking with the masterminds behind their design, plus neuroscientists, anthropologists, game theorists and more.

The filmmakers and selected talent are available for interview.

SYNOPSIS

The Pokies. They're rigged, they're addictive and they're everywhere. Worst of all, they target the poorest Australians. For the first time, the masterminds behind the machines reveal how they're programmed for addiction. And we show how our governments became the biggest addicts of all.

The Pokies. They've gone from being illegal to being everywhere. Australia has rapidly become the Pokies capital of the world, with five times more machines per capita than the USA. We're losing a staggering \$12 billion a year¹, but everyone – players, industry and government – are hooked. What is it that makes these machines uniquely addictive?

Ka-Ching! delves behind the flashing lights and spinning reels to find out what makes pokies so treacherous, leading one expert to call them the 'crack cocaine of gambling'. We speak exclusively to the masterminds behind the machine, who reveal how carefully they program Pokies, with a highly organized network of mathematicians, musicians and designers, working together on a single vision: to make sure punters keep playing, and the machines keep winning. With gambling disorder now listed alongside cocaine and heroin addiction in the world's 'psychiatric Bible', the DSM², pokies have exceptional pulling power.

In addition to neuroscientists, anthropologists and game theorists, we hear from Pokies victims themselves, who've fallen prey to what they describe as an 'unlawful hypnotism'. They let us in on the psychological lure of the machines, describing an escapist 'zone' where the stresses of the outside world disappear.

Together, these testimonies cast doubt on the industry's assertion that the problem is with a small minority of individuals who 'can't control themselves' with this otherwise innocuous past time.

Ka-Ching! takes us to the suburban backwaters of our capital cities, where Pokies thrive, with five times more machines than affluent post-codes³. We see a trail of destruction that extends far beyond the clubs and pubs – into divided households, struggling local businesses and under-resourced social services.

¹ Australian Productivity Commission report 'Gambling'.

² *The Diagnostic and Statistical Manual of Mental Disorders (DSM)*.

³ See <http://www.responsiblegambling.vic.gov.au/information-and-resources/research/recent-research/modelling-vulnerability-to-gambling-related-harm-how-disadvantage-predicts-gambling-losses>

KA-CHING!

The film finishes by looking at the role of government in this situation. We chart the unsuccessful attempt to reel in the industry during the Gillard government, which met a vociferous campaign by the gargantuan Clubs Australia. With the government reliant on tax revenue to fill budget holes, our MPs hands are tied – but there's a harrowing social cost.

BACKGROUND INFORMATION

Las Vegas casinos first embraced 'slot machines' in the sixties as a means of entertaining the wives of 'high-rolling' gamblers. With the introduction of video screens came an explosion of 'Electronic Gaming Machines' (Poker machines) in the late 1970s, transforming American casinos. However they remained illegal in Australia until the late 1980s, when cash-strapped Tasmania introduced Australia's first casino as a means of generating revenue. Despite public controversy, bans were progressively lifted in other states, resulting in the staggering rise of electronic gaming in Australia. Two decades on, Australia has more machines⁴ and a higher spend per capita⁵ than anywhere else in the world.

With this explosion has come a harrowing social cost. According to a 2010 report by the Australian Productivity Commission, Australians lose \$12 billion a year on the 'Pokies'. 40% of that is from problem gamblers, with another 20% from individuals on their way to developing a problem. The report concluded that at any one time there were approximately 100,000 addicted poker machine players with another 100,000 players on their way to addiction.

Results of addiction, according to the APC report, include loss of savings, entire pension and superannuation funds, family homes, marriages and lives. Victoria's Alfred Hospital reports⁶ that one in five suicides or suicide attempts they deal with are the result of machine addiction. The APC report surmised that every problem gambler impacts negatively on the lives of seven other individuals.

Around 70% of Australians are in favour of regulation to make Pokies safer⁷. But there is little political will to introduce such measures, with state governments together collecting around \$4 billion a year from Pokies taxes. This dilemma played out in the unsuccessful attempt by independent MP Andrew Wilkie to introduce reforms with the Gillard government. The proposed changes met a vociferous campaign by Clubs Australia, and were abandoned.

⁴ Vol 2 of the Australian Productivity Commission's 1999 report at p.N4 of appendix N.
<http://www.pc.gov.au/inquiries/completed/gambling>

⁵ <http://www.economist.com/blogs/graphicdetail/2014/02/daily-chart-0>

⁶ See p5 http://www.responsiblegambling.vic.gov.au/__data/assets/pdf_file/0010/4033/Gambling-in-people-presenting-public-mental-health-service.pdf

⁷ In an ANUPoll in 2011, 74% of the population agreed on a precommitment system for gambling, and 70% agreed gambling should be more tightly controlled. <http://lyceum.anu.edu.au/wp-content/blogs/3/uploads/ANUPoll-%20Gambling1.pdf>

KA-CHING!

The industry line has been that for problem gamblers, the fault is with the individual and the machine is an otherwise neutral recreational pastime. Yet the research discussed in *Ka-ching!* cumulatively points to a piece of technology designed and programmed for addiction.

KA-CHING!

IN MEMORIAM, NEIL LAWRENCE

Executive Producer and writer Neil Lawrence died suddenly on July 15, 2015, days after *Ka-Ching! Pokie Nation* was delivered to the Australian Broadcasting Corporation for broadcast. Neil was the driving force behind the film, which stemmed from his long-held concern about the predatory and prolific nature of pokie machines. Neil devoted three years to *Ka-Ching! Pokie Nation*, his second documentary, which forms an important part of his legacy.

Some years ago, Neil, who worked in advertising, had an office in Pyrmont, Sydney. He walked past Star City casino on his way to work and - realising it was open at 7.45am - went in to see who was there at that hour. The only patrons were about a dozen lost souls sitting at the pokies: they'd been there all night, emptying their last dollars into the machines.

That miserable sight, and a longtime connection with Reverend Tim Costello, sparked Neil's passion for the issue of poker machine addiction. After becoming aware of the compulsive nature of pokies, and the government and business interests vested in the machines, he wanted everyone to become aware too. This documentary is the result.

*It's only a handful of times in your life you meet someone as passionate and dedicated as Neil. He was determined to help those vulnerable to poker machine addiction, and it's our hope that 'Ka-Ching! Pokie Nation' realises Neil's vision of creating awareness and change around this issue. **Jane Manning, Director***



7



PRODUCER'S STATEMENT

Neil Lawrence, Executive Producer, Writer and Producer

This film came about through a long-term concern that I have had with the proliferation of poker machines in Australia. Two questions ended up dominating my thinking, and they are the central concern of the film.

The first is: if around 70% of the people in every survey that has been done want no pokies, less pokies or serious reform, why hasn't it happened? What is the nature of the power of the industry and its relationship with government?

The second: pokers machines offer the worst odds of nearly any form of gambling, and yet take six out of every ten dollars we lose. How does that add up?

These two questions have led to this film - a forensic investigation of both the machines, and the industry that profits from them.

Mitzi Goldman, Producer

Neil Lawrence brought this project to me and asked if I thought it was a story worth telling. I had no idea about the manipulative and predatory nature of the machines, nor did I understand the scientific research and intent that goes into, not only the design of the machine, but the business plans that locate the majority of machines in the poorest neighbourhoods. The more I learned, the more I deeply shared Neil's intolerance for the unfairness that is at the heart of this industry. I share the outrage and responsibility with Neil, shoulder to shoulder, to spread this story as far and wide as possible and to motivate people to appeal and agitate for regulation and reform. Our aim in making this film is to reveal the machinations behind the machines in order to minimise the harm to the most vulnerable in our communities.

I have been making documentaries for close to 30 years and this is one of the most powerful combinations of story, creativity, science, politics and passion of any project I've created. Filmmaking is always a collaborative art. Neil drove this piece and I worked alongside him, "navigating the human highway", to use one his favourite phrases. And it has been a busy, fast and at times dangerous highway.

Neil's untimely and sudden death has shocked and saddened us all. It has been an honour to create this film with him, his last work and a passion piece. It is important for all of us to think how we can work together to affect lasting change, decrease the greed and protect the vulnerable.

DIRECTOR'S STATEMENT

Jane Manning, Director

When Executive Producer Neil Lawrence invited me to direct *Ka-Ching! Pokie Nation*, it had huge appeal. I always look for a surprising story to tell: here, it was scientific research that a machine can be as powerful a drug as anything we ingest into our bodies.

Habitual poker machine use has an impact on our brain chemistry similar to substance abuse, and can result in an addiction that costs enormous money and time, with tragic consequences.

Yet, unlike with addictive substances we ingest, Australian governments have enforced little regulation of poker machines; as they're the biggest financial beneficiaries of the machines' takings, they seem to lack the motivation. Like many Australians, my life has been touched by this issue. Some years ago, my dad had a chemist shop in western Sydney, and discovered that his trusted and longest-serving employee had, over many years, siphoned over \$70,000 from the cash register to fund her poker machine habit.

Until I became immersed in the research for *Ka-Ching! Pokie Nation*, I'd always been angry with her. But now that anger redirected itself towards the NSW Government and the poker machine industry, who've overseen the installation of high intensity machines to a level not seen anywhere else in the world, except for Nevada, USA. And a great unfairness lies at the heart of this story, with far more machines in poorer postcodes – where recreational choices are limited, and clubs and pubs dominate the landscape – than in more affluent areas. Casinos cloak themselves in a 'high-roller' mystique, but most make up to 89% of their profits from poker machines.

Beyond the issue of poker machines, one of the things that really fascinated me was the universal idea running through the heart of the program: that we are all human animals. How much of our behaviour arises from rational decision-making, and how much from our biological and neurobiological chemistry?

Poker machines happen to brilliantly exploit our innate biology, and their design is constantly evolving to do so more efficiently, and thus extract more money from users.

KA-CHING!

Availed of the facts, everyone who worked on *Ka-Ching! Pokie Nation* became impassioned about this issue, even if we hadn't given it much previous thought. We now hope the audience will become just as passionately engaged, and ask: Do we want Australia's unique and ubiquitous embrace of these machines to continue?

BACKGROUND PRODUCTION NOTES

One of the great challenges of this production became clear early on: access. We spoke with, and met, some fascinating people struggling with poker machine addiction, and while they supported the project, most could never appear on camera – they felt too much shame.

They had more shame than drug addicts – perhaps because they were largely unaware that poker machines stimulate dopamine, so they believed there must be something particularly faulty or stupid about them: *How could I become addicted to a machine?*

Luckily, some were happy to appear on camera, motivated by a desire to shine a light on this issue, and their stories will help mitigate the shame for others.

Even more reluctant to be filmed were representatives of the poker machine industry – the major manufacturers in Australia, and the designers who create poker machines. There's a wall of secrecy around this industry, with many companies writing non-disclosure clauses in their employee contracts that stand for years.

We're grateful for the industry insiders who did speak with us. Marcus Fortunato and Michael Shackelford in Las Vegas, were both quite open about how the machines work. They were only able to be so as they're not bound to the major manufacturers.

Most venues, particularly clubs, were reluctant to allow us to film, and those that did were typically 'best practice' venues (for example, Fairfield RSL, which has a treatment centre for gambling addicts). The only casino that allowed us to film was in Las Vegas.

We were shocked by some of the Pokie venues we visited around Australia, while doing research. Often situated in benign suburban shopping centres, they would be open 20 hours a day, until 4am or 6am, and even on a weekday morning they could be full of zoned-out people, punching a button while feeding money for hours on end. None of these venues would permit us access to film.

Another really striking thing about working on *Ka-Ching! Pokie Nation* was how many crew members had someone close who'd struggled with a poker machine addiction – a husband, a wife, an in-law. Pokies addiction is pervasive.

QUOTES

'By putting my dollar in those machines, I consented to playing. I didn't consent to unlawful hypnotism.' *Sharon Hollamby, ex player.*

'No-one was marching in the streets demanding the right to play the poker machines. In fact quite the opposite was the case.' *Dr Charles Livingstone, gambling expert, Monash University*

'Sometimes I just want to reach out to slot machine players and say "Wake up, why are you playing this thing? It's stealing your money."' *Michael Shackleford ("The Wizard of Odds"), mathematician for pokies*

'The house will win. The more I play over time, the less I will win. If I go out today and play, I may win. If I play every day, I will lose. There's no chance. It's just built that way.' *Marcus Fortunato, Manager, Tictabs Gaming, USA*

'We were able to get some design documents, and the first thing that we saw just floored us. It's what people commonly call a "near miss". There's the jackpot symbol, the jackpot symbol, and then the jackpot symbol just above or below the pay line. So you're seeing it on the first reel, "Good", you see it on the second reel, "Good", then "Dang, didn't see it on the third reel". It's like "Oh, shucks." Manufacturers create near misses up to twelve times more than would occur by chance alone.' *Dr Kevin Harrigan, University of Waterloo, Canada*

'I tend to think of the games as little movies, little stories. Because it is kind of like a film, where you just have one scene that plays over and over again. I really like a strong character in a game, a strong pair of eyes. In that moment where you're deciding which game you're going to play, a character staring right at you might make you stop for just that moment.' *Brett Jackson, Director of Game Development, Bally Technologies, USA*

'I had no idea I could get hooked when I first started playing them.' *Denny Grantham, former addict*

QUOTES continued

'I saw these people sitting at the machines, and I thought, "What are they doing? Why would anyone bother sitting there inane at nine in the morning putting money into these things? It looks like the most tedious thing in the world." And then this day I thought, "I'll just see what it is - why, why do they do it? And I put my first bit of money in and, although it went slowly, it went from there'. *Carolyn Hirsh, Former Victorian MP and ex player*

'They're designed to just keep things flowing. So there will be a bit of a gallop to the sound of the reels going, there's a certain timing to the reel spin and how much they bounce. It's all to keep this flow going and [keep the gambler] tied to this thing that is not necessarily *alive*, but is quite vibrant.' *Cameron Munroe, ex poker machine composer*

'I have such pity for the people that play them because I know what an awful bet they are, because I've designed hundreds of these games. I mean I'm sorry, but they're just a lousy bet.' *Michael Shackleford ("The Wizard of Odds"), mathematician for pokies*

'When I play a slot machine I will probably use my human innate tendency to try to figure out a pattern. There's no pattern in slot machines and the dopamine neurons will be more active the less of a pattern there is. All drugs of addiction increase the release of dopamine neurons. So if you stimulate the dopamine neurons you're already halfway into the direction of addiction.' *Prof Wolfram Schultz, Cambridge University, UK*

'Some people will be more prone for addiction than other people. Just like there are people with blue eyes and grey eyes. That's just a natural variation in the colour of the eyes. Some individuals may release more dopamine or they have more post-synaptic neurons that are more sensitive to dopamine, or they have a stronger learning mechanism, that could explain why they get addicted.' *Prof Wolfram Schultz, Cambridge University, UK*

QUOTES continued

'You're like a rat that's sitting there, keeping pressing to get a little jolt of electricity in your reward system.' *Dr Hans Brieter, Northwestern University, USA*

'There is some evidence that there are withdrawal symptoms from gambling disorders similar to what you see with withdrawal symptoms from some substance use disorders. Often people with gambling disorders make repeated but unsuccessful attempts to try to reduce their gambling. They keep failing at that and they keep ending up back at the pokie machines.' *Dr Nancy Petry, DSM-5, Substance Disorders Team, USA*

'The pokie machine is the evil genius - or the person who created the pokie machine. It is hidden away because it's probably my shame of having them. If you went to a small bar and you said to them, "there's \$100,000 a year for turning on a switch", it's a tough thing to not want to do. The business is addicted to poker machines.' *Liam O'Keeffe, Publican, Welcome Hotel*

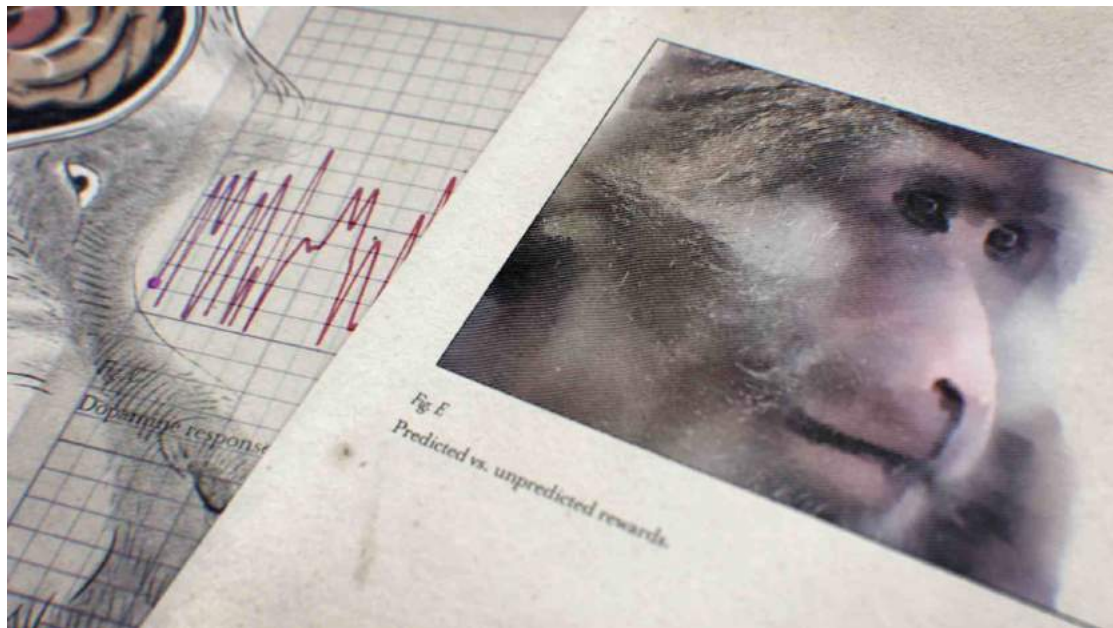
'We're just coming up to the Plough Hotel. Over \$50,000 is lost there every day. Every machine in the place makes over \$200,000 a year. It makes life very difficult for all the other local businesses there. Every one of them could do with a bit of that \$18 million if it was spent in their business.' *Dr Susan Rennie, public health advocate*

'This is just a ruthless transfer of wealth from the poorest postcodes to the gaming industry and to the government.' *Rev. Tim Costello, CEO, World Vision*

'Casinos, pubs, and clubs, aren't just lobbying the Labor Party and the Liberal National Party. They are embedded in the Labor Party and the Liberal National Party.' *Rob Oakeshott, Former Federal Independent MP*

'These people who were making all the money and alongside that seeing the human misery that came with it, dug their heels in and said "No", and then fought like fury. And unfortunately, for the time, they actually won.' *Peter Garrett, Former Federal MP*

KA-CHING!



KEY INTERVIEWEES

Prof Hans Brieter, Professor of Psychiatry and Behavioural Sciences, Northwestern University, USA. Prof Hans Brieter has conducted experiments showing monetary reward in a gambling-like experiment produces brain activation very similar to that observed in a cocaine addict receiving an infusion of cocaine.

Rev. Tim Costello, CEO, World Vision Australia. Tim Costello is one of Australia's most recognised voices on social justice, leadership and ethics, and a prominent campaigner for gambling reform. Tim currently serves as Chair of the Community Council of Australia, the Australian Churches Gambling Taskforce and the National Australia Bank's Social Responsibility Advisory Council. He has written numerous books, including co-writing *Wanna Bet? Winners and Losers in Gambling's Luck Myth*.

Marcus Fortunato, Manager, Tictabs Gaming, USA. Marcus Fortunato has 18 years experience designing poker machines for major gambling companies in Nevada.

Peter Garrett, Musician and Former Federal MP. Peter Garrett is an Australian musician, environmentalist, activist and former politician. He was the Australian Labor Party member of the House of Representatives for the seat of Kingsford Smith, New South Wales, from October 2004 to August 2013. He came under fire from Clubs NSW as a vocal supporter of the failed Pokies reforms pushed by the Gillard government in 2010.

Dr Kevin Harrigan, University of Waterloo, Canada. Dr Kevin Harrigan is co-director of the Problem Gambling Research Team at the Canadian University of Waterloo's Gambling Research Lab. He studies how computer science and math/statistics are applied in the designing of poker machines, and has been a technical Expert Witness regarding their programming.

Carolyn Hirsh, Former Victorian MP. Carolyn Hirsh is a former Australian politician who represented Silvan Province in the Victorian Legislative Council. Hirsh was the government 'whip' for the Labor-led government that introduced Pokie machines to the state. Hirsh later became addicted to Pokies, and resigned from politics after a drink-driving offence. Hirsh detailed her battle with addiction in her memoir, *Death and Addiction: A powerful story of a mother's reaction to her daughter's suicide*.

KEY INTERVIEWEES continued

Brett Jackson, Director of Game Development, Bally Technologies. Brett Jackson is an Australian game designer working in Las Vegas. He designs poker machines as Director of Game Development for American gambling company Bally Technologies.

Dr Charles Livingstone, Monash University. Dr Charles Livingstone is one of Australia's foremost gambling researchers. He is a Senior Lecturer in the School of Public Health and Preventative Medicine, Monash University, and has undertaken numerous research projects and consultancies for state and federal departments.

Rob Oakeshott, Former Federal Independent MP. Rob Oakeshott was an independent member of the NSW and federal parliaments during the years 1996-2013. He was one of a handful of independent MPs to hold the balance of power when pokie reforms were being pursued in the minority Gillard government in 2010.

Dr Nancy Petry, DSM-5, Substance Disorders Team, USA. Dr. Nancy Petry is a psychology researcher and professor of medicine at the University of Connecticut Health Center. She is a member of the American Psychiatric Association's Workgroup on Substance Use Disorders for the DSM-V.

Dr Natasha Dow Schüll, author, *Addiction by Design*. Dr. Natasha Dow Schüll is a cultural anthropologist and associate professor at MIT's Program in Science, Technology and Society. Her most recent book, *Addiction by Design: Machine Gambling in Las Vegas*, draws on extended research among compulsive gamblers and the designers of poker machines to explore the relationship between technology design and the experience of addiction.

Prof Wolfram Schultz, Cambridge University, UK. Dr. Wolfram Schultz is a world leading authority on the neuroscience of reward processing in the brain. His laboratory has conducted a broad range of studies into how dopamine and other modulatory control neurons work.

Michael Shackleford, "Wizard of Odds". Michael Shackleford is an American mathematician and actuary, best known for his professional analysis of the maths of casino games, including his popular websites, The Wizard of Odds and The Wizard of Vegas. Shackleford received much media attention when he published a paper in 2002 releasing rankings of Las Vegas casinos' pokie machine payout percentages, widely considered secretive or unavailable. He has brought media attention to unfair gambling practices in many instances. He works as a consultant to the gaming industry.

THE FILMMAKERS

Neil Lawrence, Executive Producer, writer.

Neil was the Executive Creative Director of STW, Australia's largest advertising group. In 2007 The Australian newspaper made him 'Australian Marketer of the Year' for being the strategic and creative force behind the successful election campaign for the Australian Labor Party in the Federal election. He went on to campaign for Anna Bligh in 2008, the first female elected to high office in Australia. Neil represented Australia on the film jury at the Cannes Lions, was a regular contributor to national newspapers, and was part of the panel on the ABC TV's highly successful programs Gruen Nation and Q&A. He was on the board of The Centenary Cancer Research Institute, and established and chaired its fundraising Foundation. Neil directed a documentary To Spring from the Hand on the life and work of American artist Paulus Berensohn (2012). Neil died suddenly on July 15 2015, days after *Ka-Ching! Pokie Nation* was delivered to the Australian Broadcasting Corporation.

Mitzi Goldman, Producer

Mitzi Goldman is an owner and director of Looking Glass Pictures. Mitzi has written, produced, edited and directed documentaries for close to 30 years. Her films have screened around the world in festivals in Germany, South Africa, the UK, France, Spain, the USA, and in Australia and have received many nominations and awards.

Her previous credits include Hatred (ABC), Ports Of Destiny (SBS), Chinese Take Away (SBS), Bloodlines (ABC) and End of the Rainbow (SBS, ARTE, ITVS), winner of 8 international awards including IDFA 2008. Recent credits include, Memoirs of a Plague (NAT GEO), which screened in competition at IDFA 2010, A Common Purpose (winner of the Audience Award for Best Documentary at the SFF 2011 and nominated for Best Feature Doc at 2012 AACTA Awards) and Love and Sex in an Age of Pornography (2013).

Mitzi was Co-Head of Documentary at the Australian Film Television and Radio School (2002-2008), co-founded Ozdox, a monthly forum on documentary culture, and is Chief Executive Officer of the Documentary Australia Foundation – a non profit organisation established to enable private philanthropy to the documentary sector.

THE FILMMAKERS continued

Jane Manning, Director

Jane Manning is a multi-award winning director and writer of documentary and drama. She has directed and written multiple episodes of TV series such as Coast Australia (The History Channel), 'Who Do You Think You Are?' (SBS), Deadly Women (Crime Investigation Network), 'In Their Footsteps' (Channel Nine), and 'Two of Us' (SBS).

Her drama films have won numerous Australian and international awards, including the prestigious Golden Leopard at Locarno Film Festival, Best Australian Film, Best Direction and Most Popular Film at Flickerfest, and First Place at Palm Springs Film Festival.

Andrea Lang ASE, Editor

Andrea Lang ASE has been editing and producing documentary for over fifteen years. Her internationally and Australian awarded feature documentary credits include Cunnamulla, Wedding in Ramallah, Landmines a Love Story, End of the Rainbow. She won an AFI for Best Editing in 2000 for a documentary Thomson of Arnhem Land. In 1997 she co-produced a 4 part series for ABC, Our Boys. She codirected an episode of the AFI winning series Liberal Rule in 2009.

Recent editing credits include Three Boys Dreaming and Scarlet Road, both finalists in the SFF Foxtel Documentary Awards. In 2012 she was awarded Best Documentary Editing by the ASEG for her work on A Law Unto Himself. Her most recent editing credits are Surgery Ship, which won the Audience Award at Sarasota Film Festival, and finalist in the Milan Film Festival, and The Cambodian Space Project – Not Easy Rock'n'Roll, was a finalist in the 2015 Sydney Film Festival.

Jonathan Zwartz, Composer

Jonathan Zwartz is a double bassist and composer. He has recorded two instrumental albums: 'the Sea' which was awarded two Bell Awards in 2010 and 'the Remembering and Forgetting of the Air', which received an AIR award in 2013. He has studied Screen Composition at AFTRS and has a Masters (Music) from ANU. He has composed Music for the documentary 'To Spring From The Hand' about the life and work of artist and dancer Paulus Berensohn, which was released in 2014. Jonathan has been an APRA Ambassador since 2010.

THE FILMMAKERS continued

Peter Coleman, ACS, Cinematographer

After graduating in Communications from Macquarie University, Peter worked for several years as a professional camera assistant. He then attended AFTRS in 1992, completing a Specialist Extension in Cinematography. Peter has gone on to photograph a wide variety of Drama, Documentary, Television and Imax films, working in over forty countries. During this time he has won numerous awards including an AFI nomination and two 'Golden Tripods' from the Australian Cinematographer's Society.

Justin Brickle, Cinematographer

Born to dairy farmers in South Gippsland, Victoria, Justin began his film career at the age of fourteen, making Super 8 films on and around the family farm, leaving to study at Melbourne's Swinburne Film and Television School, where he graduated with a Bachelor of Art in Film and Television in 1986.

Now based in Sydney, Justin has worked as a freelance cinematographer since 1996, shooting numerous features, short films, documentaries and television commercials – including *Love and Other Catastrophes*, *Strange Planet*, *Russian Doll*, *Lockie Leonard*, *Laid* and *Changing Minds* – to local and international acclaim.

Sam Petty, Sound designer

Sam Petty studied editing and sound at AFTRS in the early 90s. His first film as sound designer was *The Boys* in 1996, and since then he has been sound designer and mixer on about 30 features, dozens of documentaries, theatre productions at Belvoir St and Sydney Theatre Company, and countless short films. He has also composed music for many films and documentaries, and has received numerous local and international awards for his work along the way.

FURTHER READING

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