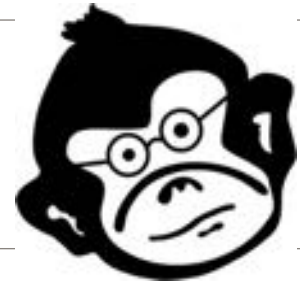

APE 2019



Bonds

The “Bond” theme worked well in 2019 to ensure a mix of topics and some truly reflective moments. This document attempts to summarise some of the main points contained in the various sessions. By necessity it offers a very reduced form of the presentations delivered and especially the discussion.

It is nice to think that for some things you still “have to be there”.

The convenors - Dr Vida Viliunas and Dr Rod Katz



The opening session provided the opportunity to reflect on the bonds that bring delegates together each year in SilverStar for APE conferences; there is a shared experience, a common interest and fellowship that links us.

Representing SilverStar, Ian Jenkins told of his background and what has drawn him from the Vale Resorts Corporation to come and work at SilverStar. Vail Resorts owns Vail, Whistler and Perisher resorts among others. Its CEO is [Rob Katz](#) (no relation) who in the past two years has foregone about \$US100M in stock options in favour of charitable causes. It is clear that Ian shares some of his old boss's concern for the community and was drawn to SilverStar because of a set of shared values. Ian highlighted the many attributes of SilverStar and why it remains a magical location.

The idea for the "bond" theme was drawn from a delegate's suggestion at the start of 2018. The actual suggestion was "bondage" but we thought that that could be a touch risqué. Bond has the advantage of multiple connotations and conjugations as verb, noun and proper noun. Some of the riffs on the theme are fairly obvious, while some are delightfully unexpected.

The artwork associated with the 2019 conference obviously references the work of Ian Fleming and the films his books inspired. Topically, the *Medical Journal of Australia*¹ has recently published an article analysing the drinking behaviour portrayed in the Bond films. The, slightly tongue-in-cheek, analysis highlights the confusion about what is a harmless fantasy and what is a dangerous public acceptance and glamorisation of dysfunctional behaviours. A discussion of this distinction was echoed in a number of subsequent sessions.

Dr Phillip Frauenfelder

Dr Frauenfelder is a general practitioner at Mermaid Beach, Gold Coast who is expanding his horizons to cross country skiing while contracting his waistline through a focus on nutrition.



Phillip wanted to explore the topic of nutrition and question the advice that is currently the bread and butter of nutritionists. Phillip makes the nexus to the theme by examining the 007 diet as described in the Fleming novels. It is fair to say that there is little mention of Bond's culinary skill, but he is portrayed as an expert orderer. Bond aficionados have reconstructed Bond's meals and created [images](#) of them in all their smokey glory. Phillip suggests that the meals portrayed stack up nutritionally. He goes on to question some of the logic of the Mediterranean diet including how it is defined. Examining mortality figures from European countries and comparing deaths attributed to Coronary Heart Disease (CHD) raises questions for Phillip as to the health benefits of the Mediterranean diet. He argues that the French Paradox is a statistical artefact largely based on the willingness of French death certifiers to give post-modernist or romantic explanations for COD. Discussion moved to what solid recommendations can be given for diet and how the advice needs to be tailored to the person seeking the advice. Phillip argues that the advice of nutritionists, in relation to diabetics in particular, relies on a set of fixed ideas rather than science or logic.

¹ Wilson, N., et al. (2018). "Licence to swill: James Bond's drinking over six decades." *MJA* 209(11)

Dr Tim Hassall - Forming Bonds: Centre for Child and Adolescent Brain Cancer Research (CCABCR)

Senior Staff Specialist in
Paediatric Oncology
Department of Haematology/Oncology
Children's Health Queensland

Tim describes the creation of the CCABCR. He covers the motivation for its formation, some of the politics involved and the benefits and challenges of the the model selected for the centre. Tim alludes to the controversy about the decision to fund the Centre. The allocation of funding for the “Big Idea” of a concerted effort to address childhood cancer was not universally accepted in the context of the introduction of new funding models such as the Medical Research Future Fund (MRFF) described by Helena Teede at the last APE conference. Nevertheless, there is a lot of effort going into making the CCABCR a success. It aims to promote the integration of clinical practice and research - “bench to bedside”. It is being developed using a “virtual” centre model where the contributors are located within different leading institutions and work towards a common goal rather than being physically co-located. There are advantages and disadvantages of this model. The advantages include a rapid set up time and sharing of resources between institutions. Disadvantages include the challenge of maintaining an esprit de corps with potential for participants to be distracted from the work of the CCABCR by the quotidian demands of their home institution. This has been recognised from the outset and created an onus for participants to make time in their schedule for regular meetings and use of various communication channels to maintain close contact between participants.



Dr Debra Devonshire - Bound to Caffeine and Alcohol

Debra Devonshire is a specialist anaesthetist practicing in Melbourne with particular interests in cardiothoracic anaesthesia, pain medicine and practitioner welfare.

Debra's presentation covers the ups and downs of our addictions to caffeine and alcohol. She delves into a little biochemistry, describing the role of "receptors" and the "ligands" that bind to them to create the effect. Caffeine binds to adenosine receptors to reduce drowsiness. Caffeine's effectiveness varies considerably from person to person based on many factors. The positives from caffeine use include enhanced brain and sporting performance and increased alertness, vigilance and mood. It may be especially beneficial for offsetting some effects of aging. Debra cites the research positing that coffee shops have a prosocial effect. On the downside are anxiety, indigestion, dehydration and sleep debt. The economic, social and geo-political role of coffee and tea should not be underestimated.



Alcohol's effects are described. It has a biphasic effect - the initial, ascending, happy phase is followed by the slump phase as alcohol levels start to descend. Like caffeine, alcohol binds to a set of receptors to create an effect. What stands out is the near universality of consumption across cultures, either of alcohol or analogous substances. Debra cites examples of mind altering substance consumption through history and across cultures and species.

The final part of Debra's presentation is devoted to the alternatives to exogenous ligand consumption for a happy and balanced life. It spans the benefits of exercise, the dopamine hits we receive from having a social media post acknowledged and the importance of social connectivity. The importance of sleep and exercise and the practice of some functional habits such as journaling, expressing gratitude, meditation and random acts of kindness.

Debra's presentation spans many of the factors we need to attend to for a happy life and plays with the many senses of bonds; chemical, social, personal, positive and negative.

Dr Mark Porter - Orthopaedic Bonds

Mark is an orthopaedic surgeon in private practice in Canberra specialising in sports injuries. His background includes 16 years as an international representative boxer. He has a lifetime average of one marathon per year and is rare among orthopaedic surgeons in having a doctorate.



Mark describes the importance of bonds for orthopaedic surgery. He makes the point that any orthopaedic procedure seeks to create strong bonds. He describes some of the factors that affect bonding where implants are involved. These include:

- The material used. Titanium tends to be a pro-bonding material as an oxide forms around the implant preventing the development of metallosis
- The surface treatment: greater surface area generally improves bonding
- Use of cement: while cement has some benefits for increasing the speed of bonding it may be associated with a reduced lifespan of the implant

Bacterial infection is a major problem with bonding in orthopaedics. Mark discusses sessile communities - bacteria that bond directly to a substrate rather than via a stalk or peduncle. He notes the options to avoid this harmful bonding including pilicides, vaccines (limited) and metal interference (through the use of heavy metals).

One of the major challenges for the future is the development of bacterial resistance. Dealing with this may require a paradigm shift from fighting to eliminate bacteria to learning to live with bacteria by encouraging the right strains of bacteria.

Juozefina Katz - Why Bond Movies are Problematic

Juozefina (Jo) is in the fourth year of a five year engineering and economics combined degree at ANU. She is president of the ANU branch of Fifty/50 - an organisation devoted to promoting equal opportunity in STEM.



Jo considers the underlying messages in Bond and other action movies, particularly as they relate to gender roles. She starts with an examination of the place of women in action films noting that women are underrepresented in speaking roles, are likely to be portrayed in recreational rather than professional activities, and are much more likely to be shown in revealing or no clothing. Looking at the Bond films in particular, females are likely to be highly sexualised and often victims of aggression. The one constant authority figure "M", as played by Judi Dench and modelled on the MI5 chief Stella Rimington, is notable for her inability to maintain authority over Bond and the constant threat to her position in the organisation. The relationship of Bond to the "Bond Girls" can be framed as predator and prey with little weight placed on expressed refusals of consent. The male ideal as played in Bond films and other action movies often involves an emotionless, violent, relentless, drunken predator. Jo asks whether this is the type of character that we want to idealise in an era where we are looking to increase female participation in STEM, corporate and public life.

Brett Dillon - Implications of changes in government tax policies

Brett Dillon is Principal of BD Financial Planning, a privately owned, boutique practice with its own License (so there is no bank or life company ownership). He is also a member of the Association of Independently Owned Finance Professionals. This has proved to be a good move in light of the Royal Commission! Brett creates an achievable, goal-oriented strategy that is specifically tailored to meet short-term and long-term lifestyle aspirations taking into account investment and other risks. Brett has a diverse client base including medical specialists, GP's, business owners, retirees and expat clients. He enjoys helping clients to solve their financial complexities and to grow and protect their wealth. They can then spend focus on spending time doing the things that are important to them.



Brett creates a nexus to the theme of “bonds” by noting that his firm cannot claim to be “independent”. It cannot use the obvious word to describe the ownership structure so long as there is one insurance policy brokered by his firm that garners a commission. This is an example of the byzantine set of laws governing the provision of financial advice.

Added to the existing set of rules for managing savings and investments, we are about to see a whole new set of policies if the expected change of government comes to pass in 2019. Brett analyses the announced or mooted policies including:

- Property investment changes
 - Limiting negative gearing
 - Changes to capital gains tax discount from 50% to 25%
- Superannuation changes
 - Reduction in non-concessional contributions from \$100k to \$75k and corresponding changes to the bring forward amounts (\$300k to \$225k)
 - Reduction in the threshold for paying Div 293 tax (currently at \$250k to be reduced to \$200k)
 - Elimination of cash refunds of imputation credits
 - Limitation or elimination of limited recourse arrangements in SMSFs
- Mooted maximum tax deductions of \$3k for personal tax
- Mooted minimum 30% distribution of income from trusts

Brett suggests a number of possible responses to these changes:

- Plan ahead to get funds into super including taking advantage of bring forward rules if possible
- Look closely at grand-fathered investments to see how they can fit with strategy
- Balance super accounts with partners where possible
- Reevaluate investment portfolios in relation to dividend imputation (this may well mean reducing bank holding in the investment portfolio)

Jeremy Gordon - Why bond yields matter

Jeremy is Institutional Business Development Manager at Challenger Limited. He is a specialist in retirement income philosophies, products and advice, across retail and institutional channels.



Jeremy's presentation goes through the basics of bonds, the misconceptions about them and their integral role in all aspects of finance from personal to international. One reason why bond prices and yields do not figure in the popular consciousness is that individuals tend not to invest directly in bonds. Bonds are essentially loans to governments or corporations. They tend to be owned by bankers or major lenders and investors. They pay interest until maturity of the bond at which point the principal is due. Both interest and principal payments on bonds are obligations on the issuing entity. Whereas for shares, dividends are discretionary and share prices fluctuate.

While both shares and bonds are tradeable on a secondary market, the fundamental advantage bonds have over equities is that they rank higher in the event of default and they offer a guaranteed repayment of principal. This higher security buffer appeals to investors who are concerned about limiting downside risk.

Factors affecting bond prices include the risk free rate as indicated by the Government's cost of borrowing, the credit perception of the issuer, the term of the bond and the market expectations of the economic outlook over that term. Looked at from the other side of the coin, the prices of bonds can indicate what the market is saying about the economic outlook generally, the credit risks associated with the issuer and the prospects of the issuer for different future bond maturities.

Jeremy takes us through some different yield curves examples and suggests what they may indicate about market expectations. A normal yield curve example has an upward slope with the very short term returns being close to zero and rising out to 4% for a 30 year maturity. This matches the position as at the beginning of 2018. What is currently worth monitoring is a pattern of inversions between short term and 10 year maturities. Inversion points for these maturities in US treasuries have previously indicated recessions in 1982, 1990, 2000 and 2008. Presumably market participants at these points are saying they are happy to lock in bond yields for 10-years, even if they are less than short term maturities, because they are fearful of future prospects. We are close to such an inversion point currently.

The prices of bonds flow through to our mortgage and business borrowing costs, government funding, how we fund our retirement, and overall confidence in the economy.

Simon Pilcher - The bonds we have with our homes, and how to break them!

Simon has spent twenty one years as a leading estate agent, selling over 1,000 properties for a total value of over \$1B. Simon is co-owner of Pilcher Residential, a leading Sydney boutique real estate company. Pilcher Residential has been eight times a finalist in the REINSW Awards for Excellence: 2005, 2006, 2008, 2009, 2010, 2012, 2015, 2016



We all have real estate stories. Simon has thousands of them. He uses a select few to illustrate the bonds that people have with their homes. These are like the bonds we have with family members and sometimes symbolise the relationship. One example is a vendor who at the final moment decided they had to withdraw their property from an auction. They could not face up to the sale of the property being the closure of a relationship as well as the sale of an asset.

When a property is a proxy for a personal relationship there are often strong emotions including remorse, blame and anger. As an experienced intermediary, Simon seeks to anticipate these feelings and provide solutions. In one case, the crucial symbol for the vendor was the doorjamb with annual height markings for the children. Simon organised for a carpenter to remove and replace the doorjamb and insert the original into the vendors' new home. In some deceased estate cases, beneficiaries were unable to enter the property because of the emotional toll.

Another example of bonded thinking is in the area of price expectation. Vendors often derive price anchors from sources such as what the neighbours sold for, what the house "owes" them, what they need for another purchase, what an on-line valuation suggests etc.

Agents often need to facilitate a shift in relationship to the house to enable a sale. This can be a shift on price or to change their relationship from a "home" to a "property". This is achieved through communication of market sentiment, changing language and encouraging the vendors to declutter and remove personal touches from the home. The latter allows the vendors to disassociate and prospective purchasers to visualise the property as their home.

Dr Kirsten Bailey - Healthy Ageing

Dr Bailey is a Fellow of the Australian Faculty of Rehabilitation Medicine. She practices as a Consultant in Rehabilitation Medicine at several public and private facilities in Newcastle with a special interest in Musculo-Skeletal medicine.



Bonding and relationships may be the key to healthy ageing.

Looking at figures from 1991 to 2011, we are living longer (globally 4.7 years for men and 4.1 for women). Kirsten breaks down a recent WHO report on the key factors for living better, as well as longer. The report describes five functional abilities for healthy ageing. These are:

1. ability to provide basic needs independently
2. ability to learn, grow and make own decisions
3. mobility, personal and in the community
4. ability to build and maintain relationships
5. ability to contribute to society

While intrinsic capacity is important, creating supportive environments for these abilities is the policy challenge. This spans built environment, regulation, health and social programs.

Independent provision of basic needs relies on affordability of adequate diet, housing, clothing and health care. This is related to socio-demographics (including ethnicity, gender, education and wealth) and their effect on advantage and disadvantage. For the ability to learn and grow and make decisions, it is important to challenge ageism. To address mobility, it is necessary to institute activity programs and falls prevention programs, supply adaptive equipment, safe walking areas and access lifts and ramps. To maintain and build relationships we need strong encouragement and volunteering opportunities in schools, community groups and organisations like the Mens' Shed. These can also help create a sense of contribution to society.

Guarding against dementia is an important aspect of healthy ageing. Ongoing education builds cognitive reserve so needs encouragement. Health factors that need attention include depression, high blood pressure, overweight and obesity, and diabetes. Hearing loss can accelerate dementia and physical and social activity can be preventive. It was once argued that smoking prevented dementia but it is thought that smokers simply died before the onset of dementia.

Kirsten discusses the role of retirement. There is evidence that later retirement has a positive effect on cognitive function in older age but is related to the cognitive stimulation of the occupation and the level of leisure activities in retirement.

There is an important role for policy to combat ageism, enable autonomy and supporting healthy ageing across all levels of government.

A/Prof Darren Mansfield - Sleep Health

Darren is deputy director of Respiratory Medicine at Monash Health. He completed a PhD in sleep disorders looking at the interaction of sleep disordered breathing and heart function in patients with congestive heart failure. Darren's subject generates extensive discussion as people question him about their personal experiences with family and friends suffering disordered breathing during sleep.

Darren makes the connection to the bond theme by showing George Lazenby in sleep wear and various underwear as advertised by Pat Rafter.



The burden of sleep related disease covers sleep apnoea (4% of males and 2% of females), insomnia (10% of population), shift work (18 % of the population with a sleep disorder occurring in 10%), and circadian rhythm disorders (8% of adolescents). There are other disorders such as excessive sleepiness affecting smaller numbers. Combined, the economic impact of sleep disorders has been estimated at \$66b p.a. (Deloitte Access Economics 2017). Such a massive economic impact should attract policy responses but, like many preventative initiatives, it is the sort of creeping crisis that fails to draw the attention that it deserves. Most of the impact of sleep disorders is a result of productivity losses, especially associated with sleep apnoea. Darren examines the evidence for sleep apnoea's effects on general cardiovascular health. There seems to be an association between severe apnoea and CVS issues but the SAVE trial produced a negative result in linking apnoea generally to CVS events. Darren discusses the possible reasons for this including the case inclusion criteria, the period of the trial (84 months not sufficient to show longer term impacts) and the treatment compliance for those in the treatment group.

Darren discusses the theories about what triggers insomnia. He introduces the concept of sleep efficiency as the ratio of time in bed to time asleep. Of the various treatments for insomnia, he proposes sleep restriction as the most effective. While it won't work for everyone, it is effective. It involves cutting back the time in bed. This creates a sleep debt and improves sleep efficiency. This can help to breakdown some of the negative associations insomniacs may have with spending time in the bedroom.

As usual for Darren's presentations, there was a lot of Q&A regarding the role of anti-sleepiness medications such as Modafinil, menopause and sleep and the impact of HRT, and the use of melatonin in various doses and forms.

A/Prof Andrew Stevenson - Bonds in colorectal surgery

Andrew (left in picture with son Grant and wife and delegate Dr Aida Stevenson) was previously the director of the Colorectal Surgery at Royal Brisbane Hospital and is Associate Professor at the University of Queensland. He has been at the forefront of clinical trials of different surgical approaches to colorectal cancer treatment and is internationally recognised as a leader in his field.



Andrew's presentation is literally dazzling as he takes us through operations where various tissues or organs are highlighted in bright green. He describes the use of fluorescence in surgery. Fluorescence is the light effect provoked by an electron bond being broken. IndoCyano green is the most common fluorescent compound used in surgery. It comes at a cost of approximately \$150 per use. As is well illustrated in the operative videos, the cost of the use of fluorescence is justified on the basis of precision, performance (time saving) and surgical workload (stress).

Andrew describes the increasing use of fluorescence and how it is being incorporated in robotic surgery, including for the highlighting of blood supply issues and where to carry out dissections. Fluorescence is complemented by the use of high definition and 3D imagery. Recent research suggests there are improvements in surgical performance where 3D displays are correctly set up. Andrew describes RCTs he has participated in to evaluate the impact of 3D displays in laparoscopic and Total Mesorectal Excision (TME) surgery. These are cited in the most recent consensus statement from the European Association of Endoscopic Surgery (EAES) noting that "3D significantly shortened operative time ...reduction in complications was observed when 3D systems were used ...trainees were significant faster and 62% performed fewer errors when using 3D."

As usual, Andrew's presentation provided a tour de force of presentation technology, content and innovation.