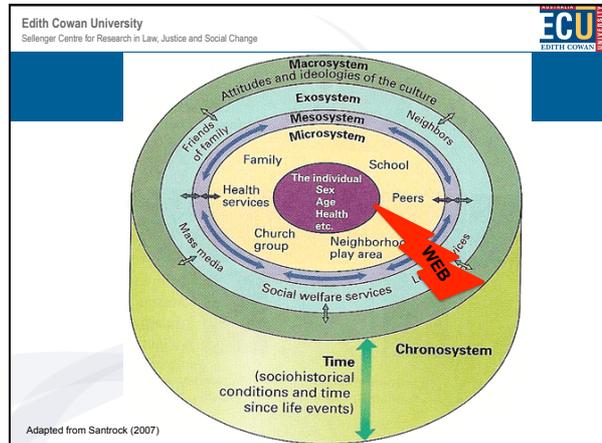


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Technology use and safety risks

Dr Julian Dooley
Sellenger Centre for Research in Law, Justice and Social Change
Edith Cowan University



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Neurological development

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Normal brain development

1. **Proliferation of pathways**
- makes the brain versatile and adaptable
2. **Pruning of pathways**
- unused pathways are eliminated
3. **Myelination (white matter)**
- remaining pathways faster and more efficient

Brain **adapted to environment** and efficient in functioning
BUT less able to change in future.

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Frontal Lobe

- Emotions
- Planning
- Organization
- Short term memory
- Impulse control

Executive Functions

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26 weeks (preterm) Birth (term) 3 months 6 months

9 months 1 year 2 years 15 years

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Brain development

Experience-dependent synapse formation

Neurogenesis in the Hippocampus

High-Cortex synapses (Prenatal cortex)

Synaptogenesis (~3 months to 15-18 years?)

Myelination (-2 Months to 5-10 years)

Cell Migration (6-24 Prenatal weeks)

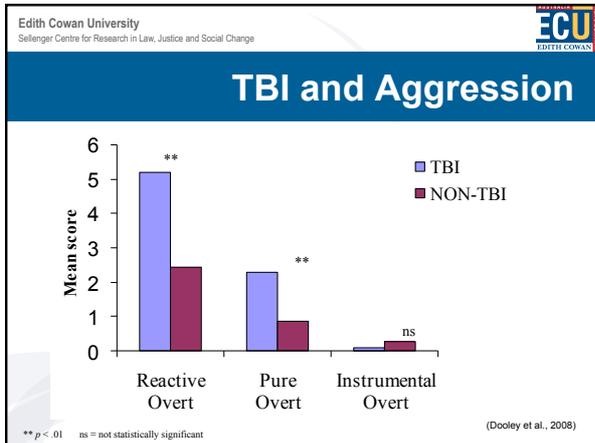
Age

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AN ODD KIND OF FAME
Stories of Phineas Gage

MALCOLM MACMILLAN



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Impairment of social and moral behavior related to early damage in human prefrontal cortex

Steven W. Anderson, Antoine Bechara, Hanna Damasio, Daniel Tranel and Antonio R. Damasio
nature neuroscience • volume 2 no 11 • november 1999

ishment'. This stage of moral reasoning is characteristic of 10-year-olds, and is surpassed by most young adolescents. The patients demonstrated limited consideration of the social and emotional implications of decisions. Failed to identify the primary issues involved in social dilemmas and generated few response options for interpersonal conflicts. Their performance was in stark contrast

Fig. 4. Control subjects with adult-onset prefrontal damage. The overlap of lesions in the 6 patients with adult-onset lesions is depicted on a normal reference brain. Lesions of individual subjects were transferred onto the reference brain using MAP-3 (ref. 24). Darker shade indicates a higher number of overlapping subjects. The areas involved include all sectors damaged in the target subjects.

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Media Violence Exposure and Frontal Lobe Activation Measured by Functional Magnetic Resonance Imaging in Aggressive and Nonaggressive Adolescents

Vincent P. Mathews, MD,* William G. Kronenberg, PhD,† Yang Wang, MD,* Joseph T. Lurito, MD, PhD,* Mark A. Lowe, PhD,* and David W. Dunn, MD†

Conclusion:
Exposure to violent media resulted in similar activation patterns as seen in HA participants.

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In the Eye of the Beholder: Eye-tracking Assessment of Social Information Processing in Aggressive Behavior

Tako A. Horsley · Bram Orobio de Castro · Menno Van der Schoot

non-hostile hostile

non-hostile cues. Aggressive children did not attend more to hostile cues, nor attend less to non-hostile cues than non-aggressive children. Quite contrary, aggressive children looked longer at non-hostile cues, but none the less recalled less non-hostile information, and did attribute more hostile intent than their non-aggressive peers.

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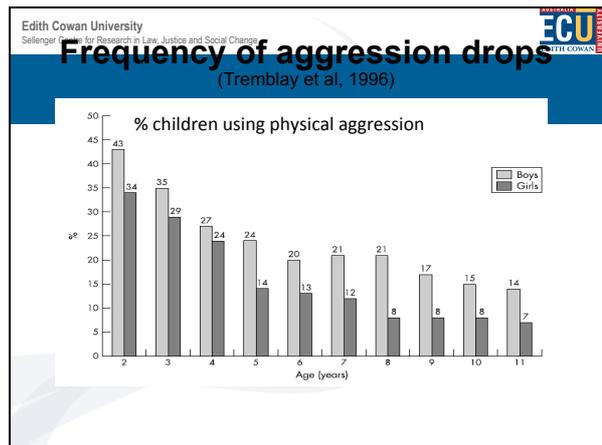
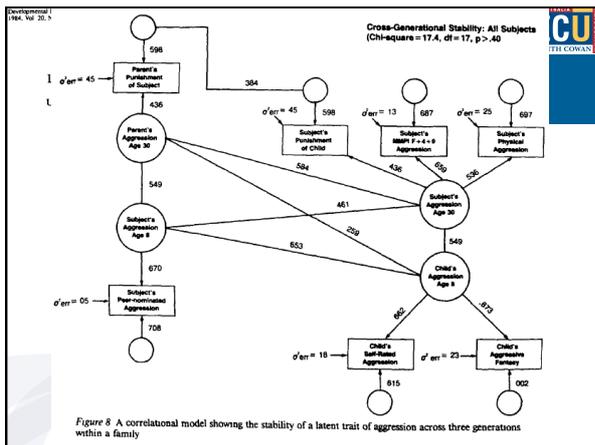
Psychological development

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Albert Bandura (1925-)



1. Biological factors
2. Direct experience
3. Observational learning
4. External sources
5. Vicarious experience
6. Self-imposed consequences



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Erikson's theory of identity development

Erikson's stages of personality development

Stage	1	2	3	4	5	6	7	8
Oral	Basic trust vs. mistrust							
Anal		Autonomy vs. shame, doubt						
Phallic			Initiative vs. guilt					
Latency				Industry vs. inferiority				
Genital					Identity vs. role confusion			
Young adulthood						Intimacy vs. isolation		
Adulthood							Generativity vs. stagnation	
Maturity								Ego integrity vs. despair

Freud's stages of personality development

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Defining morality...

« Venturing onto the icy precipice of defining the moral, it is reasonable, if not complete, to suggest that morality refers to a set of behavioural imperatives that protect a society from the tendency of individuals to wantonly advance their own aims at the expense of the well-being of those around them.

Moral imperatives serve to curtail these individual behaviors, as well as encouraging prosocial behaviors... »

Catherine A. Hynes 2008, p. 27

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Importance of MR

- **SOCIETY**
 - Govern rules of society
 - Dictates social norms
 - Transgression of norms and rules
 - Links with socially maladaptive behaviour, criminality, rule-breaking, justice system, etc.
- **CLINICAL POPULATIONS**
 - Psychopathy
 - Conduct disorder
 - Pervasive developmental disorders
 - Traumatic Brain Injury

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MR and social cognition

- Complex notion
- Related to other cognitive and social skills
 - Decision making/Judgment
 - Theory of mind
 - Executive function
 - Cognitive control
 - Inhibition/self-regulation
 - Social skills
- Strong emotional component
- Influence of other variables (e.g. SES)
- Challenges for assessment

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Julie, a 16-year-old, is having difficulty making a decision. A few days ago, Julie's younger sister, Susanna, had a minor accident with their parents' car. Susanna only had her learner's permit and wasn't allowed to drive without her parents. She had taken the car out anyway and had driven around the neighborhood while her parents were away for the day. Upon her return, Susanna had accidentally dented the car a little by running into a telephone pole while attempting to park. Julie wasn't sure what she should do about this situation, but was seriously considering telling her parents that it was she who had caused the dent instead of Susanna in order to avoid a great deal of family fighting.

Having been in a lot of trouble recently, Susanna had strained her parents' relationship, as they frequently fought over what to do about her being bad. Julie didn't want to cause further strain on her parents' marriage by telling them about Susanna's latest blunder. On the other hand, she didn't want to have to lie about what happened either, as she felt that lying was wrong. Julie was also concerned about covering up for Susanna in this way. She always tried to set a good example for Susanna and didn't want Susanna to think that she could just break the rules whenever she pleased. Besides, Julie didn't want to damage her positive relationship with her parents—she'd worked hard on being close with them and didn't want to risk hurting them by losing their trust. She also worried about her relationship with Susanna. Julie and Susanna had stood up for one another equally in times of trouble in the past, especially when it came to getting in trouble with their parents.

Julie began to wonder what might happen if she told her parents the truth. She had always believed that her parents were too strict in certain areas, and thought that this would probably be one of those areas. More than likely, she thought, their punishment of Susanna would be quite severe, and she didn't want her little sister to have to suffer. If they thought that she had dented the car instead of Susanna, however, they would probably just laugh about it, as she had her driver's license but was just learning how to drive. Besides, Susanna kept it secret last year when Julie skipped school so that she could go to the beach with friends, and she felt she owed Susanna for this. But Julie also realized that the loss of self-respect she would experience might not be worth going along with the story she and Susanna had made up.

Please take a moment to think about what Julie should do, then turn the page and answer the questions.

MJS, Gump, 1994

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Classic MR dilemmas

Heinz's dilemma ...

a man named Heinz who must decide whether to break the law and steal an exorbitantly priced drug to save his wife who is dying of cancer



MJI, Colby & Kohlberg 1987

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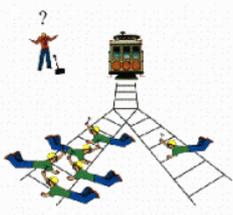
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Classic MR dilemmas

Trolley dilemma ...

runaway trolley will kill five people on the track ahead if it continues on its course

only way to save the five people is for you to hit a switch that will turn the trolley onto a side track where it will kill one person



Do you hit the switch?

Foot, 1978; Greene, 2007

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MR Assessment

- Classic moral tasks
 - Relevance to children and adolescents?
 - Engagement of emotion and concern?
 - Personal involvement?
 - Social engagement and interaction?
 - Appropriate for clinical populations?
 - Cognitive confounds?

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MORAL

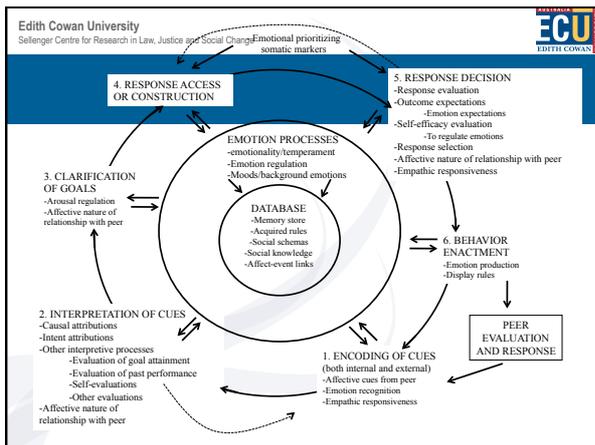
NON-MORAL

Harenski & Hamann 2006

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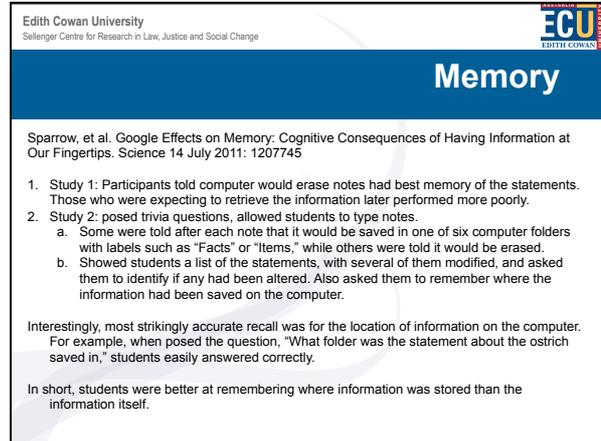
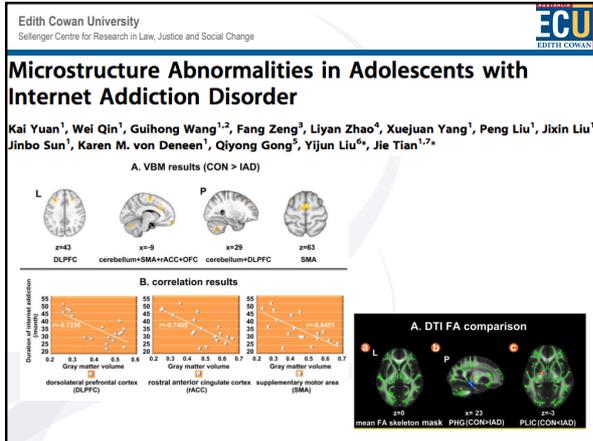
<p>SIMPLE ANSWER TASK</p> <p><i>Audio: Is this Ben's house?</i></p>	<p>MORAL DILEMMA TASK</p> <p><i>Will you let her copy?</i></p>
<p>CORRECT SIMPLE ANSWER TASK</p> <p><i>Audio: This is Ben's house</i></p>	<p>CONSEQUENCE TASK</p> <p><i>You both are punished</i> Yes</p>

Pujol et al. 2007



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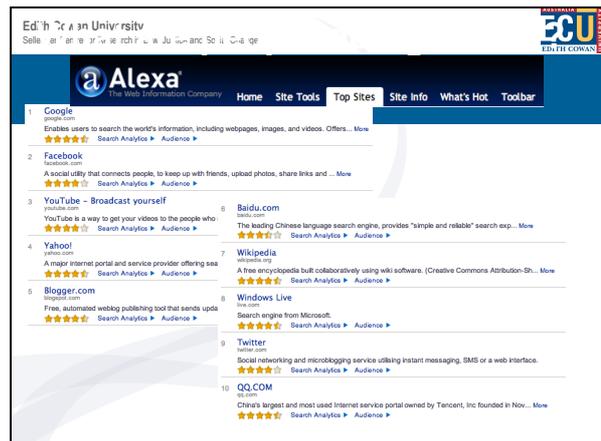
What about technology?



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	14-17 years	18-24	25-34	35-49	50-64	65 years & over
1	Email 84.5%	Email 84.5%	Email 81.7%	Email 79.2%	Email 78.6%	Email 70.1%
2	Instant messaging 61.1%	Banking 60.3%	Banking 75.8%	Banking 60.4%	Banking 53.8%	Paid bills online 39.2%
3	Downloaded music 57.7%	Academic research 50.3%	Paid bills online 62.2%	General browsing / surfing 57.0%	Paid bills online 47.2%	Banking 36.8%
4	Played games online 42.0%	General browsing / surfing 47.5%	General browsing / surfing 60.6%	Paid bills online 47.8%	General browsing / surfing 45.4%	General browsing / surfing 33.9%
5	General browsing / surfing 40.7%	Instant messaging 40.2%	Maps or directions 51.5%	Weather 38.7%	Maps or directions 39.4%	Weather 23.0%
6	Academic research 34.5%	Maps or directions 36.0%	Weather 39.8%	Maps or directions 37.6%	Weather 35.4%	Maps or directions 21.9%
7	Weather 28.2%	Paid bills online 34.3%	Downloaded software 35.8%	Business related research 27.5%	Travel information & services 24.7%	Downloaded software 21.5%
8	Downloaded software 27.8%	Downloaded software 29.1%	Searched for jobs / employment 27.2%	Researched product/service 26.8%	Researched product/service 24.4%	Travel information & services 20.7%
9	Downloaded pictures 26.2%	Searched for jobs / employment 29.0%	Researched product/service 26.1%	Downloaded software 25.4%	Downloaded software 22.7%	Researched product/service 18.9%

Source: Roy Morgan Single Source, March 2009, 14+ years old, N = 1094 performed internet activity the last four weeks.



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KONY 2012
INVISIBLE CHILDREN



NOTHING IS MORE POWERFUL THAN AN IDEA
WHOSE TIME HAS COME

82,998,765 All

Updated by invisiblechildren on Mar 9, 2012
To see real time reports on LRA activity in the D.R.Congo, Central African Republic and South Sudan visit: <http://www.invisiblechildren.com/>

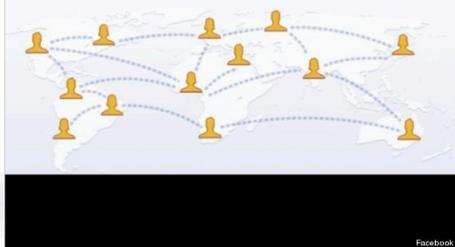
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FACEBOOK SCAMS

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Fake Friend Request

6 of 10



Facebook

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Fake Page Spam

7 of 10



facebook

WOW Now you can see anyone who looks at your profile!

Time: Tuesday, April 26, 1:00pm - 4:00pm

Created by: [Profile]

Home Info: See Your Profile Visitors At - http://127.0.0.1:2112/123456789

Write something...

7 Not Attending

