

Evolutionary psychology for an Integrative Supervision

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Overview

- What is evolutionary psychology?
 - The evolved mind
 - Learning and evolved predispositions
 - Natural Pedagogy
- Paleontological and Anthropological signs of supervision
 - Acheulean handaxes and Ache monkey hunting
- Benefits of an evolutionary perspective
 - Integrative metatheory
 - Knowledge about hierarchy, fear and relationships
 - Paul Gilbert's Compassion Focused Therapy

What is Evolutionary Psychology (EP)?

- The application of evolutionary perspectives to the study of the human mind and behavior
- Our species' history and evolution has shaped both our bodies and our minds
- As such our thoughts and behavior evolved to adapt us to our evolutionary past environment
- Note: We did not evolve brain structures and mental mechanisms to be rational and happy, they evolved because they increased our fitness – our ancestors were those who actually became ancestors...
- This may cause us to act irrational, hypocritical, immoral, or to love our children, fall in love, and be altruistic
- It explains why we eat too much sugar and fat, despite knowing we ought not to.

EP's Model of the Mind

- The mind is made up of a large number of mental mechanisms/ psychological adaptations/ modules (partly compartmentalised/partly interacting)
- These are adaptations, and process context specific and cue specific information according to evolved rules that helped our ancestors solve adaptive problems
- Human universal nature is made up of our collection of such mechanisms

Are phobias conditioned/learnt?

- Most psychologists have believed for years that we learnt how to fear different stimuli based on Mowrer's two factor theory:
 - 1 – a classical conditioning of pain and stimulus
 - 2 – operant conditioning by continued avoidance to stimulus
- Today we know this is probably not true – most phobias do not seem to be the result of conditioning..:

Common phobias vs socially induced fears

- We would like most people to be more worried and avoidant about: smoking, fat, sugar, alcohol, drugs, driving too fast (without a safety belt), weapons, sunbathing, lack of exercise...
- Recent and real dangers
- Government campaigns to socially induce these fears generally fail



Common phobias vs socially induced fears

- Most people are afraid of evolutionary relevant, but mostly harmless stimuli: small animals, insects, dogs, large animals, dark, heights, strangers, social situations, being away from home, snakes and...

... Spiders!



Predictions I

- There are members of this audience who
 - a) Have lived their whole or most of their life in Norway or similar countries (where spiders are harmless)
 - b) Have not been bitten by dangerous spiders abroad
 - c) Have not been conditioned vicariously to fear spiders
 - d) And who still are very cautious or even phobic of spiders!





Predictions II



- a) There are members of this audience who are phobic or very cautious of wasps/bees
- b) There will be more people who **HAVE BEEN STUNG** and are **NOT** phobic than **ARE PHOBIC**
- c) Most of those who are phobic have **NOT** been stung



Anxiety I

- Not primarily learned (scant empirical support)
- Matures naturally (according to life history)
- Best explained by a functional (evolutionary) analysis
 - the function of fear is to motivate the organism to avoid or protect from danger
 - Species specific defense behaviours
 - Each specific disorder focuses on the exaggerated fear of a specific danger
 - Blood phobia: while no other anxiety disorder causes low blood pressure/fainting, this is especially functional when the organism is in danger of blood loss

Anxiety II

- Heritability of phobias: Small/Moderate 20-50.
- There is a genetic component that explains phenotypic variance
- All anxiety disorders have a genetic component
- At the same time most of the variance is not accounted for
 - we have had many theories of aetiology; most of the environmental factors are probably currently not correctly defined

Learning and evolution

- Learning is often considered as a valid opposing explanation to evolutionary mechanisms
- Note: We DO learn – we evolved to learn!
 - BUT some things are learnt easily (evolutionary preparedness), some are species specific, and some cannot be learnt
 - In other words: Learning mechanisms are evolved mechanisms and need to be specified, there is no such thing as general learning
 - E.g. Even though we do not learn phobias, we probably learn NOT to fear the phobic stimuli (Sandseter & Kennair, 2011)
 - What is special about learning through supervision?

Natural Pedagogy (Csibra & Gergely, 2011)

- Species-specific cultural learning by communicative, intentional teaching
- “The adaptation for natural pedagogy was made necessary by the cognitively opaque knowledge and skills required by technological inventions during early human evolution.”
- “This technology, including its materialization as artifacts and its know-how as expertise, was inherently cultural in nature.”
- “However, communicative knowledge transfer, with its assumptions about genericity and culturally shared information, must have opened up new domains of cultural contents to be preserved or stabilized by communicative means.”
- “Conventions, rituals, and novel symbol systems could also be transmitted to the next generation by natural pedagogy, and the operation of modern social institutions are unimaginable without communicative knowledge transfer.”
- NB: Anthropological **consensus** that there is little universal teaching in non-Western cultures, **but** “Demonstration” of Natural Pedagogy more typical than Western style “teaching”

Acheulean handaxes



- Made for approx. 1 million years, almost unchanged (sic!)
- Art or tool or both?
- Demanded specialised skills – and probably some form of transmission of knowledge/ culture/ SUPERVISION...

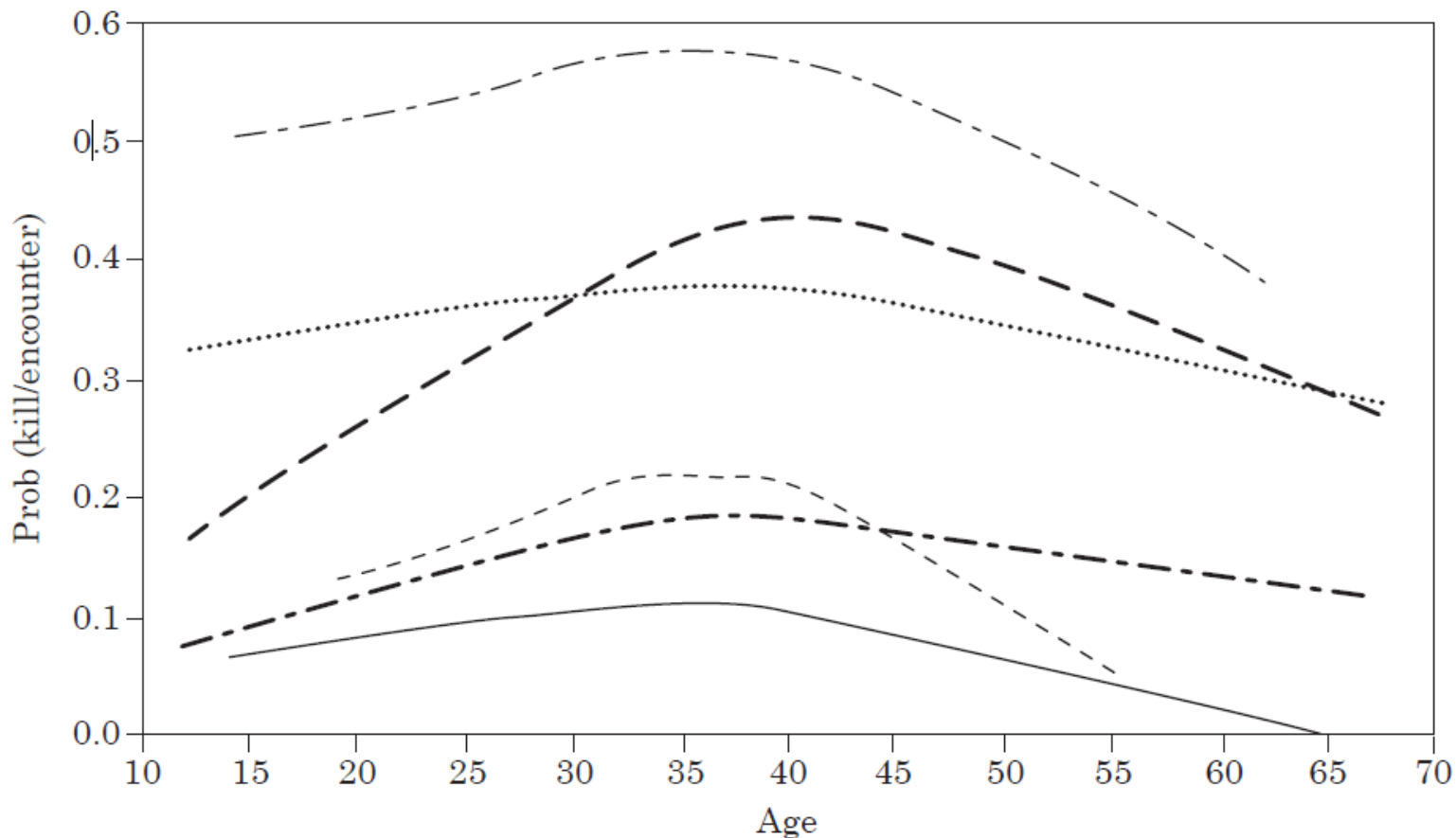


Figure 4. LOWESS curves of the probability of kill upon encounter across the lifespan for all ten prey species. Those with no discernible age effect are given an average success rate in the legend. Species: coati (— - —); monkey t. lizard $65/140 = .46$ (— —); armadillo (·····); collared peccary (— - - -); paca (— - - —); agouti $25/200 = .13$; white-lipped peccary deer $69/663 = .10$; tapir $2/202 = .01$ (— —).

Age-dependency in hunting ability among the Ache of Eastern Paraguay

- “Later, boys begin using bows and arrows (that are made for them by older men) and start to hunt terrestrial game, deer, peccaries, tapir, etc. But if they wound these animals, older hunters are usually called to help track them. Only in their late 20s do hunters begin to make their own tools and participate in monkey hunts as archers. This is partially because predicting where monkeys will flee, and getting into position for a good shot through thick forest undergrowth is complicated. In addition, hunters surround monkeys and shoot from all angles and older hunters are afraid the younger inexperienced hunters will either shoot somebody by accident (not correctly calculating the trajectory of their arrow) or get shot themselves. Such accidents are common. Finally, calculating where an arrow will fall requires integrating information about angles, velocity, wind speed and intervening vegetation. Young hunters frequently lose several arrows in each hunt, while older hunters usually find most of the arrows they shoot.”

Metatheoretical Promise of EP

- Provides a biopsychosocial theoretical approach (Kennair, 2004).
- Has been applied within all areas of psychological research, and also social science in general (e.g. Petersen & Kennair, 2009)
- Contributes original and fruitful hypotheses
- May potentially integrate different approaches to human mind, e.g. through social cognitive neuroscientific research programmes and a broad multi disciplinary approach

Compassion-focused therapy I

- Paul Gilbert's Compassion Focused Therapy is an evolutionary informed form of psychotherapy
- "Compassion-focused therapy is an integrated therapy that draws from social, developmental, evolutionary and Buddhist psychology, and neuroscience."
- We are a super social hierarchical species
- We are both prosocial and antisocial in our navigation of our social ecology, and enter into fluctuating relationships with allies and competitors
- We internalize approaches to our self and implement many of the same dominating and subordinate strategies to ourselves
- "The Dalai Lama often stresses that if you want others to be happy – focus on compassion; if you want to be happy yourself – focus on compassion"

Compassion-focused therapy II

- Important lessons for supervision:
 - How is the supervision relation perceived?
 - How does the supervisor and the person being supervised perceive herself/himself?
 - How critical and self critical is the supervisor?
- Fear limits performance, hierarchical situations and performance situations may create fear, and compassionate state of mind may reduce the hierarchical nature of the setting and decrease fear and self criticism

Findings from EP: Sex differences

- One of the areas EP has researched is sex differences in sexual perception, attraction and behaviour among the sexes.
- This is one important area of human relations that an EP approach helps us understand – relevant for the workplace.
- An example might be Haselton's work on sexual overperception bias: men overperceive how sexually interested women are, when the woman is merely being friendly...
- This can help us understand both the perpetration and perception of sexual harassment (Kennair & Bendixen, submitted)

Integrative Theory of Supervision

- I claim such a theory must be:
 - Truly biopsychosocial and truly cross-disciplinary
 - It must therefore integrate several levels of analysis and several areas of knowledge
 - An evolutionary framework provides a framework for such integration, it does not reduce everything to biology!
 - Important aspects that need to be considered are already addressed within an evolutionary framework: such as predispositions, sex differences, biased social perception, hierarchical processes, harassment, fear, in-group bias etc.

Further reading

- Gilbert (2009) "Introducing compassion-focused therapy", *Advances in psychiatric treatment*
- Kennair (2004) *Evolusjonspsykologi – en innføring i menneskets natur*, Tapir Akademisk Forlag
- Sandseter & Kennair (2011) "Children's Risky Play from an Evolutionary Perspective: The Anti-Phobic Effects of Thrilling Experiences", *Evolutionary Psychology*
- Petersen & Kennair (2009) "Evolutionary political science - integrating evolutionary psychology and the social sciences", *Human Characteristics. Evolutionary Perspectives on Human Mind and Kind*, Cambridge Scholars Publishing
- Csibra & Gergely (2011) "Natural pedagogy as evolutionary adaptation", *Philosophical Transactions of the Royal Society B*
- Walker, Hill, Kaplan & McMillan(2002) "Age-dependency in hunting ability among the Ache of Eastern Paraguay", *Journal of Human Evolution*
- Haselton (2003) "The sexual overperception bias: Evidence of a systematic bias in men from a survey of naturally occurring events", *Journal of Research in Personality*

Evolutionary Definition of Psychopathology

- Harmful Dysfunction
 - Harmful: Value laden concept, but necessary – we do not treat that which is not harmful.
 - Dysfunction: Biologically defined as some mental mechanism not functioning as it evolved to do.
- Both aspects demand thorough assessment and knowledge
 - for many conditions we do not have knowledge of function
 - For many conditions we need a thorough reflection on whether the condition indeed is harmful
 - All values are based in a societal/cultural framework