Personality, motivation & emotion: Individual differences in happiness, arousal, and control

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Outline – Individual Differences in Happiness, Arousal, and Control

- Happiness
  - Extraversion & happiness
  - Neuroticism & suffering
  - Extraverts & neurotics

- Arousal
  - Performance & emotion
  - Insufficient stimulation & underarousal
  - Excessive stimulation & overarousal
  - Credibility of the inverted-U hypothesis
  - Arousal seeking
  - Affect intensity

- Control
  - Perceived control
  - Desire for control

Reading:
Reeve (2009)
Ch 13
(pp. 367-390)

Three motivational principles
- Happiness
- Arousal
- Control

Personality characteristics
- Extraversion
- Neuroticism
- Sensation seeking
- Affect intensity
- Perceived control
- Desire for control

Based on Reeve (2009, p. 367)
Individual differences in happiness, arousal, & control

Why do different people have different motivational and emotional states even in the same situation?

Based on Reeve (2009, pp. 368-369)

Happiness & Personality

Personality as typology

Figure 13.1: Personality Characteristics as Distributed within a Normal Distribution versus a Typology
Based on Reeve (2009, Figure 13.1, p. 369)
Personality types vs. traits

- Relatively few people are at either end of a personality characteristic (most people are mid-way)
- Beware of typologies' oversimplification

For example:
Focus on “extraversion” (as a trait) rather than “introverts vs. extraverts” (as a typology).

Based on Reeve (2009, pp. 368-369)

The big 5 personality traits

- The “Big 5” superordinate traits are well supported by a wide variety of research.
- Measures
  - NEO (Costa & McCrae, 1980s)
  - IPIP – freely available
- Some disagreement about the naming of these traits.

The big 5 personality traits: Labels

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6 (Authors)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional control</td>
<td>Social adaptability</td>
<td>Inspiring intellect</td>
<td>Conformity</td>
<td>Will to achieve</td>
<td>Fiske (1948)</td>
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<td>Emotionality</td>
<td>Surgency</td>
<td>Culture</td>
<td>Agreeableness</td>
<td>Conscientiousness</td>
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<td>Extraversion</td>
<td>Intellect</td>
<td>Friendly compliance</td>
<td>Will to achieve</td>
<td>Digman (1990)</td>
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<td>Neuroticism</td>
<td>Extraversion</td>
<td>Openness to experience</td>
<td>Agreeableness</td>
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<td>AFFECT</td>
<td>POWER</td>
<td>INTELLECT</td>
<td>LOVE</td>
<td>WORK</td>
<td>Peabody &amp; Goldberg (1989)</td>
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</tbody>
</table>
The big 5 personality traits
The Big 5 according to the “NEO”:

- Neuroticism
- Extraversion
- Openness to Experience
- Agreeableness
- Conscientiousness

Tip: Remember as NEOAC rather than OCEAN because it conveys order of variance explained.

The big 5 personality traits

<table>
<thead>
<tr>
<th>Trait Dimension</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuroticism (vs. Emotional stability)</td>
<td>Calm vs anxious</td>
</tr>
<tr>
<td></td>
<td>Secure vs insecure</td>
</tr>
<tr>
<td></td>
<td>Self-satisfied vs self-pitying</td>
</tr>
<tr>
<td>Extraversion (vs. Introversion)</td>
<td>Sociable vs retiring</td>
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<tr>
<td></td>
<td>Fun-loving vs sober</td>
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<tr>
<td></td>
<td>Affectionate vs reserved</td>
</tr>
<tr>
<td>Openness (vs. Closedness)</td>
<td>Imaginative vs practical</td>
</tr>
<tr>
<td></td>
<td>Preference for variety vs routine</td>
</tr>
<tr>
<td></td>
<td>Independent vs conforming</td>
</tr>
<tr>
<td>Agreeableness (vs. Disagreeableness)</td>
<td>Soft-hearted vs ruthless</td>
</tr>
<tr>
<td></td>
<td>Trusting vs suspicious</td>
</tr>
<tr>
<td></td>
<td>Helpful vs uncooperative</td>
</tr>
<tr>
<td>Conscientiousness (vs. Carelessness)</td>
<td>Organised vs disorganised</td>
</tr>
<tr>
<td></td>
<td>Careful vs careless</td>
</tr>
<tr>
<td></td>
<td>Disciplined vs impulsive</td>
</tr>
</tbody>
</table>

Adapted from McCrae & Costa (1986, p. 1002)

Personality traits → motivation, emotion, and behaviour

Personality traits:
- cause people to react differently to different situations, e.g., positively or negatively
- cause people to approach and avoid different situations
- determine choice and alteration of situations, e.g., approach, avoid, or modify situation

Based on Deckers (2010, pp. 210-212)
Happiness and unhappiness are related, but separate, dimensions

Big 5 personality factors & happiness

Happy student profile:
- ↓ Neuroticism
- ↑ Extraversion
- ↑ Agreeableness
- ~ Conscientiousness
- ~ Openness

Source: "Very Happy People" by E. Diener & M. E. P. Seligman, 2002, Psychological Science, 13, Table 3, p. 84.
Personality & happiness

Extraversion

Neuroticism

Based on Reeve (2009, p. 370)

Extraversion & happiness

Extraversion

Those with stronger extraversion have a greater capacity to experience positive emotions and a stronger and more sensitive Behavioral Activating Systems (BAS).

Eagerness to approach potentially rewarding situations

Extraverts are more sociable than introverts

Extraverts exhibit greater social dominance than introverts

Extraverts are more venturesome than introverts

Based on Reeve (2009, Figure 13.2 Components of extraversion, p. 371)

Neuroticism & happiness

Neuroticism

Those with stronger neuroticism tend to experience more frequent and intense negative emotions and a stronger and more sensitive Behavioral Inhibition Systems (BIS).

Eagerness to avoid potentially punishing situations

Greater avoidance behaviour and emotional distress (than emotionally stable individuals)

Based on Reeve (2009, pp. 372-373)
Happiness economics

- HE = Quantitative study of happiness, positive and negative affect, well-being, quality of life, life satisfaction and related concepts, typically combining economics with other fields such as psychology and sociology.

- The field has grown substantially since the late 20th century, for example by the development of methods, surveys and indices to measure happiness and related concepts.

- e.g., World Database of Happiness - http://worlddatabaseofhappiness.eur.nl/

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Subjective well-being in 97 countries

<table>
<thead>
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<th>Country</th>
<th>Mean</th>
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<tbody>
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<td>Denmark</td>
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</tr>
<tr>
<td>Japan</td>
<td>6.37</td>
</tr>
<tr>
<td>Peru</td>
<td>6.21</td>
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<td>W. Germany</td>
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<td>El Salvador</td>
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<td>Malta</td>
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<td>Luxembourg</td>
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<td>Liechtenstein</td>
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<td>Greece</td>
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<td>Hong Kong</td>
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<td>Jordan</td>
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<td>Portugal</td>
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<td>Morocco</td>
<td>3.46</td>
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<td>Mozambique</td>
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<td>Mexico</td>
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<td>Nepal</td>
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<td>Uganda</td>
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<td>Ukraine</td>
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<td>Uzbekistan</td>
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<td>Venezuela</td>
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<td>Vietnam</td>
<td>1.10</td>
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<tr>
<td>Yemen</td>
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<td>Zambia</td>
<td>0.94</td>
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<tr>
<td>Zimbabwe</td>
<td>0.94</td>
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</tbody>
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Easterlin paradox (1974)

- Within a given country people with higher incomes are more likely to report being happy.

- However, in international comparisons, the average reported level of happiness does not vary much with national income per person, at least for countries with income sufficient to meet basic needs.
Happy Planet Index

- Environmental efficiency of supporting well-being (Ratio of happiness to resource consumption (sustainability))
- Countries shaded by their position in the HPI (2006)
- Highest-ranked countries are bright green
- Lowest are brown

Based on http://en.wikipedia.org/wiki/Happy_Planet_Index

Natural happiness and synthetic happiness

- Natural happiness: Occurs when you get what you want.
- Synthetic happiness: Occurs when you accept that you didn't get what you want.
- Synthetic happiness is as real as natural happiness
- e.g., in dating, you look to get what you want, in marriage, you find a way to like what you’ve got.

Why are we happy?

- Why are we happy? (Dan Gilbert, 2004, 21:20, TED talk)
  http://www.ted.com/talks/dan_gilbert_asks_why_are_we_happy.html
Arousal

A person's arousal level is mostly a function of how stimulating the environment is.

People engage in behaviour to ↑ or ↓ their level of arousal:

- When underaroused, people seek out opportunities to ↑ their arousal levels, because ↑s in environmental stimulation are pleasurable and enhance performance whereas ↓s are aversive and undermine performance.
- When overaroused, people seek out opportunities to ↓ their arousal levels, because ↑s in environmental stimulation are aversive and undermine performance whereas ↓s are pleasurable and enhance performance.

Based on Reeve (2009, p. 374)

Performance & arousal

Hebbian curve became popular in the 1950s

![The Inverted-U Curve: Relationship between Arousal Level and Performance/Well-Being](source)

Based on Reeve (2009, pp. Figure 13.3)
Performance & arousal

Original Yerkes-Dodson (1908) diagram. The Hebbian curve left out the top line showing that increased arousal did not adversely impact performance during simple tasks.

Based on http://commons.wikimedia.org/wiki/File:OriginalYerkesDodson.JPG

Insufficient stimulation & underarousal

Sensory deprivation:
An individual's sensory and emotional experience in a rigidly unchanging environment.

Human beings harbour motives for counteracting insufficient stimulation and underarousal.

Based on Reeve (2009, pp. 375-377)

Insufficient stimulation & underarousal

Heron’s sensory deprivation study
The brain and nervous system prefer a continual and moderate level of arousal generated by environmental stimulation.

Based on Reeve (2009, Figure 13.4, p. 376)
Excessive stimulation & overarousal

Overstimulating, stressful environments

Emotional disruption
- anxiety, irritability, anger

Cognitive disruption
- confusion, forgetfulness, impaired concentration

Physiological disruption
- sympathetic nervous system, hyperactivity

Humans are motivated to counteract excessive stimulation and overarousal.

Based on Reeve (2009, p. 377)

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Sensory isolation tanks

- Sensory isolation tanks minimise external stimulation
- Relaxing
- Restorative
- Facilitate higher consciousness

"Over the last 25 years I have exhausted numerous addictions and relationships in pursuit of the very sensation - or state of being actually - that the floatation tank gave me in one hour. No drug-induced euphoria, no sexual or romantic high, no nicotine or food fix, nor any spiritual venture ever brought me as close to my desired destination as the float tank did. This illusively defined 'destination' became much clearer to me after floating in the tank. It's a truly remarkable and freeing experience."

- Annie C - http://www.samadhitank.com/

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Credibility of the inverted-U hypothesis

- Neiss’s criticism
  - Descriptive rather than explanatory
  - Does not apply to everyday affairs in which arousal level changes relatively little.

- Revelle, Amaral, & Turriff’s experiment (1976)
  - The inverted-U hypothesis applies nicely to everyday sources of stimulation – e.g., caffeine and time pressure.
Sensation seeking

Personality characteristic related to arousal and reactivity.

Related to the extent to which a person’s central nervous system (brain and spinal cord) requires change and variability.

Based on Reeve (2009, p. 379)

Sensation seeking

Defined as “the seeking of varied, novel, complex, and intense sensations and experiences, and the willingness to take physical, social, legal, and financial risks for the sake of such experiences”.

(Zuckerman, 1994)

Based on Reeve (2009, p. 379)

Sensation seeking & sensory deprivation

- Zuckerman was a graduate student in sensory deprivation studies.
- Became interested in subjects who:
  - hated deprivation
  - couldn’t tolerate low levels of stimulation
  - wanted new experiences
Sensation seeking
- Sensation seeking determines how a person reacts to a situation or event.
- Sensation seeking determines the situations and activities a person chooses.

Who was the sensation seeker?
Steve Irwin  Princess Diana

Sensation seekers
- Need higher levels of stimulation to maintain positive mood.
- When stimulation falls → mood slumps.
- Push to keep stimulation levels as high as possible.
- Enjoy more intense sensations and experiences
- Are more likely to:
  - Search for novel experiences
  - Prefer unusual stimuli and situations
  - Choose things that are out of the ordinary
  - See sensations and experiences being worth physical, social, legal, or financial risks
  - Engage in risky sports and activities
  - Be more susceptible to boredom
**Sensation seekers – Biological basis**

- SSs have ↓ levels of monoamine oxidase (MAO) (enzyme that metabolises monoamines, such as serotonin, norepinephrine, and dopamine)
- SSs tend to have relatively ↑ levels of dopamine → their biochemistry favours approach over inhibition
- SSs tend to have relatively ↓ levels of serotonin → their biochemistry fails to inhibit them from risks and new experiences

Based on Reeve (2009, pp. 379-381)

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**Sensation Seeking Scale**

(SSS; Zuckerman)

- Thrill and adventure seeking (action gamblers)
- Seek experiences outside the conventional lifestyle (travel, friends, art)
- Disinhibition: release of inhibitions, escape the pressures of daily life. (escape gamblers)
- Low tolerance for boredom, repetition and sameness.

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**SS and addiction**

Sensation seeking is correlated with:

- Alcoholism
- Gambling

Perhaps SS is common in all addictions
Control

**Perceived control**
The extent to which an individual believes that s/he possesses the capacity needed to produce positive outcomes.

**Desire for control**
The extent to which individuals are motivated to establish control over the events in their lives.

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**Affect intensity**

Figure 13.5 Daily Mood Reports Graphed Over 80 Consecutive Days

Based on Reeve (2009, p. 384)

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**Affect intensity**

Figure 13.6 Affective reactions to good and bad events by affect-intense and affect-stable individuals

Based on Reeve (2009, p. 383)
Perceived control

In order to perceive that one has control over a given situation...

1. The self must be capable of obtaining the available desired outcome.

2. The situation in which one attempts to exercise control needs to be at least somewhat predictable and responsive.

Based on Reeve (2009, p. 384)

Perceived control

Perceived control beliefs

High perceived control vs. Low perceived control

- Goal setting
- Task choice
- Effort
- Concentration
- Persistence in the face of difficulty
- Positive emotional states
- Problem-solving strategies
- Performance

Based on Reeve (2009, pp. 384-385)

Self-confirming cycles of high and low engagement

Perceived control beliefs
High vs. Low

Actual outcomes

Engagement vs. disaffection

Based on Reeve (2009, pp. 385-386)
## Desire for control

<table>
<thead>
<tr>
<th>Aspiration level</th>
<th>Response to challenge</th>
<th>Persistence</th>
<th>Attributions for success and failure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High DC vs. Low DC</strong></td>
<td>Select harder tasks; set goals more realistically</td>
<td>React with greater effort</td>
<td>Work at difficult tasks longer</td>
</tr>
<tr>
<td><strong>High DC benefit</strong></td>
<td>Higher goals are achieved</td>
<td>Difficult tasks are completed</td>
<td>Difficult tasks are completed</td>
</tr>
<tr>
<td><strong>High DC liability</strong></td>
<td>May attempt goals too difficult</td>
<td>May develop performance-inhibiting reactions</td>
<td>May invest too much effort</td>
</tr>
</tbody>
</table>

Figure 13.7 Influence of desire for control during achievement-related performance (Burger, 1985) Based on Reeve (2009, p. 387)

## Summary

- Two personality characteristics related to happiness:
  - Extraversion → BAS → Happiness
  - Neuroticism → BIS → Unhappiness
- Two personality characteristics related to arousal:
  - Sensation seeking
  - Affect intensity
- Two personality characteristics relate to control:
  - Perceived control
  - Desire for control

Based on Reeve (2009, pp. 388-389)

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## Upcoming lectures

- Individual differences
  - Unconscious motivation (Ch 14)
  - Growth psychology (Ch 15)
- Summary & conclusion (Ch 16)
References


Open Office Impress

- This presentation was made using Open Office Impress.
- Free and open source software.
- [http://www.openoffice.org/product/impress.html](http://www.openoffice.org/product/impress.html)