Extrinsic motivation & goal-setting

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Overview

1. Extrinsic motivation (Ch 5)
2. Goal setting & goal striving (Ch 8)

Extrinsic motivation

Reading:
Reeve (2015)
Ch 5
(pp. 116-151)
Outline – Extrinsic motivation

- Quasi-needs
- Extrinsic motivation
- Incentives, consequences, and rewards
  - Incentives
  - Reinforcers
  - Consequences
- Hidden costs of reward
  - Intrinsic motivation

Based on Reeve (2015, pp. 116-117)

Quasi-needs

- Situationally-induced wants that create tense energy to engage in behaviour to reduce built-up tension.
- Deficiency-oriented.
- What we lack, yet want, from the environment in a rather urgent way.

Examples:
- an umbrella in the rain
- a bandaid for a cut
- a secure job

Based on Reeve (2015, pp. 119)

Extrinsic motivation

Environmentally-created reason (e.g., incentives or consequences) to engage in an action or activity.

"Do this in order to get that" type of motivation

requested behaviour extrinsic incentive or consequence

“What’s in it for me?” motivation

Based on Reeve (2015, pp. 120)
### External regulation of motivation: Incentives, consequences, and rewards

* Based on operant conditioning

<table>
<thead>
<tr>
<th>Incentives</th>
<th>Consequences</th>
<th>Rewards</th>
</tr>
</thead>
<tbody>
<tr>
<td>~ Precedes behaviour, create</td>
<td>~ Follows behaviour</td>
<td>Any offering from one person to another person in exchange for his or</td>
</tr>
<tr>
<td>expectation, based on past</td>
<td>~ Positive: “Do”</td>
<td>her service or achievement.</td>
</tr>
<tr>
<td>learning</td>
<td>~ Negative: “Stop”</td>
<td></td>
</tr>
<tr>
<td>~ Attracts or repels a person from a</td>
<td>~ Punishers: “Stop”:</td>
<td></td>
</tr>
<tr>
<td>course of action.</td>
<td>~ A action to avoid an undesirable quality (e.g.</td>
<td></td>
</tr>
<tr>
<td>(e.g., a nice smell vs. a bad</td>
<td></td>
<td></td>
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<tr>
<td>smell)</td>
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Based on Reeve (2015, pp. 120-122)

### Reinforcer effectiveness

Reinforcer effectiveness is determined by:
- Quality and intensity
- Immediacy
- Recipient’s need for, and perceived value of, the reward (person/reinforcer fit)

Based on Reeve (2015, p. 124)

### Managing behaviour by offering reinforcers

Reeve (2015), Figure 5.1: Effect of reinforcement on use of orthodontic device, p. 125
Rewards
How do rewards work? Do they facilitate desirable behaviour?

An extrinsic reward enlivens positive emotion and facilitates behaviour because they signal opportunity for a personal gain.

When events take an unexpected turn for the better, then dopamine is released and Behavioural Activation System (BAS) neural activation occurs, as the brain inherently latches onto the environmental signal of the unexpected gain.

Based on Reeve (2015, pp. 124-125)

Any external event (Rewards)

Controlling function

“If you do X, then you get Y.”

• Decreases intrinsic motivation
• Interferes with quality of learning
• External regulation increases
• Self-regulation undermined

Informational function

“Because you were able to do X, that means you are effective, competent.”

• Increases intrinsic motivation
• Enhances high-quality learning
• Enhances self-regulation

Based on Reeve (2015, pp. 124-125)

Do punishers work? Do they suppress undesirable behaviour?

Research shows that punishment is an ineffective motivational strategy (popular but ineffective)

“Side effects”

Negative emotionality e.g.,
• crying,
• screaming,
• feeling afraid

Impaired relationship between punisher and punishee.

Negative modeling of how to cope with undesirable behaviour in others.

Based on Reeve (2015, pp. 128-130)
Immediate & long-term consequences of corporal punishment (Spanking)

- **Short-term:**
  - Immediate compliance

- **Long-term:**
  - Aggression
  - Anti-social behaviour
  - Poor mental health
  - Poor quality of relationship with parent
  - Victim of physical abuse
  - More likely to abuse own child
  - More likely to get a criminal record

**Intrinsic motivation**

The inherent desire to engage one’s interests and to exercise and develop one’s capacities.

“**I am doing this because it is ...**” type of motivation

- engaged activity
- interesting, fun, enjoyable
- satisfying psychological needs (i.e., autonomy, competence, relatedness)

**Hidden cost of rewards**

Extrinsic rewards can have unexpected, unintended, and adverse effects on intrinsic motivation, learning, and self-regulation.

**Using a reward to engage someone in an activity**

<table>
<thead>
<tr>
<th>Intended primary effect</th>
<th>Unintended primary effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>➢ Promotes compliance (behavioural engagement in the activity)</td>
<td>➢ Undermines intrinsic motivation</td>
</tr>
<tr>
<td></td>
<td>➢ Interferes with the quality and process of learning</td>
</tr>
<tr>
<td></td>
<td>➢ Interferes with the capacity for autonomous self-regulation</td>
</tr>
</tbody>
</table>

Based on Reeve (2009, Figure 5.3, p.129)

Based on Reeve (2005), pp. 130-131

Based on Reeve (2005, pp. 130-131)
Origins of intrinsic motivation

Intrinsic motivation

Psychological need satisfaction

Autonomy

Competence

Relatedness

Autonomy support (from environment and relationships)

Competence support (from environment and relationships)

Relatedness support (from environment and relationships)

Based on Reeve (2015, Figure 5.4, p. 131)

Benefits of intrinsic motivation

Persistence

The higher a person's intrinsic motivation, the greater the person's persistence on that task.

Creativity

The more people experience interest, enjoyment, satisfaction, and challenge of the work itself, the more creative they are.

Conceptual understanding/
High-quality learning

Flexible thinking, Active information processing, Learning in conceptual way

Optimal functioning & well-being

Greater self-actualisation, Greater subjective vitality, Less anxiety and depression, Greater self-esteem

Based on Reeve (2015, pp. 131-133)

Benefits of incentives, consequences, and rewards

When there is no intrinsic motivation to be undermined, rewards can make an otherwise uninteresting task seem suddenly worth pursuing e.g.,

- Improving children’s reading fluency
- Participating in recycling
- Increasing older adults’ participating in physical activity
- Preventing undesirable behaviours such as biting
- Preventing drunk driving
- Getting motorists to stop at stop signs

Based on Reeve (2015, pp. 137-139)
**Reasons not to use extrinsic motivation**
(even for uninteresting endeavors)

- **Extrinsic motivators** undermine the quality of performance and interfere with the process of learning.
- **Using rewards** distracts attention away from asking the hard question of why a person is being asked to do an uninteresting task in the first place.
- **There are better ways** to encourage participation than extrinsic bribery.
- **Extrinsic motivators** still undermine the individual’s long-term capacity for autonomous self-regulation.

Based on Reeve (2015, p. 138)

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**Cognitive evaluation theory**

Predicts the effects of an extrinsic event on a person’s I-E motivation based on the event’s effect on the psychological needs for competence and autonomy.

- All external events have **two functions:**
  - Control behaviour
  - Inform competence

Which function is more salient determines how the external event will affect intrinsic and extrinsic motivation.

Based on Reeve (2015, pp. 139-141)

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**Cognitive evaluation theory**

If this event meant mostly to control behavior?

- If yes, autonomy and intrinsic motivation decrease and extrinsic motivation increases.
- If no, autonomy and intrinsic motivation remain high and extrinsic motivation remains unaffected.

Any external event

If this event meant mostly to inform competence?

- If effectiveness information is positive, competence and intrinsic motivation increase.
- If effectiveness information is negative, competence and intrinsic motivation decrease.

Based on Reeve (2015, pp. 141)
What makes us feel good about our work?  
Dan Ariely  
TED Talk (20 mins)  
Start at 8:54  
http://www.youtube.com/watch?feature=player_detailpage&v=3tC7p6kGZ54

Types of extrinsic motivation
Self-Determination Theory (SDT) posits that different types of motivation can be organised along a continuum of self-determination or perceived locus of causality.

Extrinsic motivation

- External regulation
- Introjected regulation
- Identified regulation
- Integrated regulation

Increasing autonomy

Self-determination continuum showing types of motivation

Based on Reeve (2015, Figure 3.6, p. 143)
Four part experience of amotivation

<table>
<thead>
<tr>
<th>Maladaptive ability beliefs:</th>
<th>Maladaptive effort beliefs:</th>
<th>Low value placed on task:</th>
<th>Unappealing task characteristics:</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;I don't have what it takes to do well.&quot;</td>
<td>&quot;I don't have the energy.&quot;</td>
<td>&quot;This task has no interest for me.&quot;</td>
<td>&quot;This task is boring.&quot;</td>
</tr>
</tbody>
</table>

Based on Reeve (2015, pp. 146-147)

Motivating others to do uninteresting activities

Ways to promote more autonomous types of extrinsic motivation

- **Providing a rationale**
  - Explain why the uninteresting activity is important and useful enough to warrant one's volitional engagement

- **Building interest**
  - Involves first catching one's situational interest in an activity and then holding that initial interest over time by developing an individual interest in the activity.

Based on Reeve (2015, pp. 147-149)
Building interest in a particular domain

Characteristics of the environment
Object and activities that are novel, surprising, need-satisfying, and relevant to one's goals.

Builds situational interest

Characteristics of the person
Person develops an enduring disposition to prefer activity in a particular domain.

Actualised experience of interest
Builds individual interest

Increased:
- Attention
- Learning
- Knowledge
- Achievement

Extrinsic motivation summary

- Extrinsic motivation arises from environmental rewards and punishments (operant conditioning)
- Hidden cost → undermining of intrinsic motivation
- Cognitive evaluation theory
- Types of extrinsic motivation
- Motivating others to do uninteresting activities

Based on Reeve (2015), pp. 147-149

Reading:
Reeve (2015)
Ch 8
(pp. 213-238)
Outline – Goal setting & goal striving

- Plans
  - Corrective motivation
  - Discrepancy
  - Affect and feelings
  - Two types of discrepancy
- Goal setting
  - Goal-performance discrepancy
  - Difficult, specific goals enhance performance
  - Feedback
  - Criticisms
  - Long-term goal setting

Based on Reeve (2015, p. 213)

Discrepancy between present and ideal states

How one's life is going. How one wishes life was going.

Present state ——— Ideal state

Discrepancy occurs when the present state falls short of the ideal state. It is the discrepancy, rather than the ideal state per se, which creates a sense of wanting to change.

Based on Reeve (2015, pp. 218-219)

The TOTE unit

The cognitive mechanism by which plans energise and direct behaviour towards an “ideal state”.

TOTE model:
Iterative progress towards a goal
i.e., T-O-T-O-T-O-TO

Based on Reeve (2015, Figure 8.1, p. 216)
Two types of discrepancy

Discrepancy reduction
- Based on the discrepancy-detecting feedback that underlies plans and corrective motivation.
- Discrepancy reduction corresponds to plan-based corrective motivation.
- Discrepancy reduction is reactive, deficiency overcoming, and revolves around a feedback system.

Discrepancy creation
- Based on a “feed-forward” system in which the person looks forward and proactively sets a future, higher goal.
- Discrepancy creation corresponds to goal-setting motivation.
- Discrepancy creating is proactive, growth pursuing, and revolves around a “feed-forward” system.

Affect and feelings

- If making good progress, positive affect is experienced
- If making poor progress, negative affect is experienced
- Affective responses provide informational feedback to guide corrective action and energise action.

Corrective motivation

Discrepancy between actual and ideal states does not automatically trigger action. Instead, discrepancy creates “corrective motivation”, i.e., desire to reduce the discrepancy by either:

Corrective motivation to reduce discrepancy between actual and ideal:
- Act to achieve ideal state
- Change and revise the goal
Goal setting

A goal is what an individual is trying to accomplish.

Goals are reference points for guiding action so that one can evaluate the adequacy for one's performance.

Goals define the cross-over point between satisfaction and dissatisfaction.

A target to aim for - usually with an external object to aim for such as money or a high grade.

Difficult and specific goals raise performance to remove goal-performance discrepancies

Setting a goal

When difficult

Enhanced performance

When specific

Energy and sustains behaviour

• Increases effort, person works harder
• Increases persistence, person works longer

Directs behaviour

• Increases attention, person works with focus
• Increases planning, person works smarter

Based on Reeve (2015, p. 220-221)

Additional goal mechanisms

Why do goals work to increase performance?

Clarify performance expectations.

Counteract apathy, boredom.

Make feedback important.

Without goals, performance can be emotionally unimportant.

Attainment can generate feelings of pride, satisfaction, or competence that the task itself cannot generate.

Based on Reeve (2009, p. 214)
Should I make my goals public?

Common wisdom is that sharing goals helps people to achieve them because it creates social expectation. However, when you tell someone your goal, the mind is tricked into feeling that it’s already done, and then you’re less motivated to do the actual hard work. Therefore, if you’re going to tell someone your goals, make sure to do so in such a way that you derive no satisfaction from doing so.

Derek Sivers:
Keep your goals to yourself (3:15 mins):
http://www.ted.com/talks/derek_sivers_keep_your_goals_to_yourself

Feedback

- Along with goals, feedback is vital for goal attainment
- Provides knowledge of results and documents the performer’s progress
- Defines performance against a standard
  - Above standard
  - At standard
  - Below standard
- Acts as a reinforcer or punisher
- Instructive to future goal setting efforts

Based on Reeve (2015, p. 225)

Effect-sizes from 500+ meta-analyses of various influences of school achievement

<table>
<thead>
<tr>
<th>Influence</th>
<th>No. of effects</th>
<th>Effect-Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feedback</td>
<td>139</td>
<td>1.13</td>
</tr>
<tr>
<td>Students’ prior cognitive ability</td>
<td>896</td>
<td>1.04</td>
</tr>
<tr>
<td>Instructional quality</td>
<td>22</td>
<td>1.00</td>
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<tr>
<td>Instructional quality</td>
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<td>.64</td>
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<tr>
<td>Direct instruction</td>
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<td>.62</td>
</tr>
<tr>
<td>Acceleration</td>
<td>162</td>
<td>.72</td>
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<tr>
<td>Home factors</td>
<td>720</td>
<td>.67</td>
</tr>
<tr>
<td>Remediation/feedback</td>
<td>146</td>
<td>.66</td>
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<tr>
<td>Students disposition to learn</td>
<td>93</td>
<td>.61</td>
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<tr>
<td>Class environment</td>
<td>921</td>
<td>.56</td>
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<tr>
<td>Challenge of Goals</td>
<td>2703</td>
<td>.52</td>
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<tr>
<td>Bilingual programs</td>
<td>205</td>
<td>.51</td>
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<tr>
<td>Peer tutoring</td>
<td>125</td>
<td>.50</td>
</tr>
<tr>
<td>Mastery learning</td>
<td>104</td>
<td>.50</td>
</tr>
<tr>
<td>Teacher in-service education</td>
<td>3912</td>
<td>.49</td>
</tr>
<tr>
<td>Parent involvement</td>
<td>339</td>
<td>.46</td>
</tr>
<tr>
<td>Homework</td>
<td>110</td>
<td>.43</td>
</tr>
<tr>
<td>Questioning</td>
<td>124</td>
<td>.41</td>
</tr>
</tbody>
</table>

OVERALL EFFECTS 500,000+ .40
Effective feedback

Effective feedback answers 3 questions:
- Where am I going? (goals) Feed Up
- How am I going? Feed Back
- What next? Feed Forward

Based on Hattie and Timperley (2007, Figure 1)

3-step Experiential Learning Cycle

Feedback to enhance learning

Hattie & Timperley (2007)

- Feedback is the single most important predictor of achievement
- But feedback alone is not sufficient – effective instruction is also needed
- Feedback is powerful – but it can be helpful or harmful

Criticisms of goal setting

Goal setting has advantages, but pitfalls include that:
- Goal setting works best when tasks are relatively uninteresting and straightforward
- Goal conflict, overload, and stress
- Undermining of intrinsic motivation

Based on Reeve (2015, pp. 225,227)
Long-term goal setting

- For uninteresting tasks, short-term goals help to make them more interesting by creating extrinsic motivation.
- For interesting tasks, only long-term goals enhance intrinsic motivation. Short-term goals can be experienced as controlling distractions (undermining autonomy).

Based on Reeve (2015, pp. 225-227)

Problems with long-term goal setting

- Lack of immediate performance feedback
- Prolonged unreinforced performance

Goal commitment is likely to decrease (especially if the LTG is uninteresting)

Solution
Translating LTG into a series of short-term goals
- LTG e.g.: Become a psychologist
- STG e.g.: Pass Exam X

Based on Reeve (2015, pp. 227-228)

Goal striving

Goal striving (effort, persistence, attention, strategic planning) is needed to translate goal setting into performance and goal attainment.

- Mental stimulation: Focus on visualising processes and actions required for success (rather than imagining what it would feel like to achieve the goal).
- Implementation intentions: Advanced planning for when, where, and how goal striving will be actioned. Addresses self-regulation requirements for:
  - Getting started
  - Staying on track
  - Resuming after interruption

If ... then

Based on Reeve (2015, pp. 228-234)
Goal disengagement

- Goal disengagement is knowing when to stop and abandon a goal (e.g., if it is unattainable or a more important, incompatible goal is adopted).
- Ill-advised goal striving can make the goal striver vulnerable to failure feedback and psychological distress.
- “When one door closes, another door opens; but we so often look so long and regretfully upon the closed door, that we do not see the ones which open for us”. - Alexander Bell

Summary

1. Ideal-actual discrepancies creates cognitive motivation → plan of action to remove discrepancy (corrective motivation).
2. Goals that are specific, difficult, and self-congruent generally improve performance.
3. Feedback provides information about performance which generates negative or positive emotional motivational states accordingly.
4. Short-term goals provide rich feedback; long-term goals foster intrinsic motivation.
5. Implementation intentions help focus, start, continue, and resume: If (situational cue) → Then (goal striving action)
6. Goal disengagement is reduction or cessation of effort in the face of unattainable goals. Adaptive when it frees up resources to allocate to a different goal.

Next lecture

Personal control beliefs (Ch 9)

The self & its strivings (Ch 10)
References


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