Constraints

BOOST YOUR
CREATIVITY

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Learning outcomes

AFTER COMPLETING THEME 3: CONSTRAINTS, STUDENTS WILL BE ABLE TO

• Explain and discuss the dual role that constraints play in a creative process, as constraints can both impede and enable new solutions
• Analyse and discuss key constraints in a given creative assignment
• Challenge and introduce constraints constructively as a resource to develop more original solutions

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Constraints in your everyday life

What do you think of when you hear the word ‘constraints’?

When have you recently experienced constraints? At school? At home? In your spare time?

How would you think constraints typically affect creativity? Why?
Perspectives on constraints

Assumption 1
Fewer constraints are better

Assumption 2
More constraints are better

Perceived potential for creativity

Level of constraint intensity

Eminent artists like Stravinsky, Picasso, etc.

General understanding
What are constraints in a creative process?

The word ‘constraints’ is an umbrella term

Constraints cover many different subordinate terms such as:
• Creative choices
• Preferences
• Obstacles
• Needs
• Demands
• Wishes
• Conventions
• Limits
• Rules
• Requirements
• ...depending on the creative domain
Creativity constraints in practice

Puzzle-platform video game: *LIMBO* (2010) by Playdead Studios

LEGO bricks
Creativity constraints in practice

Art
“The more constraints one imposes, the more one frees one’s self of the chains that shackle the spirit”\(^{(1)}\)
Igor Stravinsky (1882-1971), Russian-born composer

Innovation
“Constraints shape and focus problems and provide clear challenges to overcome. Creativity thrives best when constrained […] Innovation is born from the interaction between constraint and vision”\(^{(2)}\)
Marissa Ann Mayer (b. 1975), Google employee #20, former CEO of Yahoo

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Types of constraints

**Intrinsic**

- Materials
- Weight
- Colour
- Letters in the alphabet
- Breaking strain
- Battery life
- Resistance to acid, heat, etc.
- Other built-in properties


Types of constraints

Imposed

• Deadlines
• Budgets
• Materials
• Resources available
• Client requirements
• User needs
• Criteria for success
• KPIs (key performance indicators)
• Other constraints imposed by partners and stakeholders

Types of constraints

Self-imposed

• Target group
• Colour
• Idioms, modes of expression
• Instrumentation
• Key, chords and tempo
• Tone of voice
• Various stylistic preferences
• Creative materials
• Collaborators
• Tools
• Other creative choices that you yourself have made deliberately

Types of constraints

Invisible

- Habits
- Norms
- Traditions
- Biases and prejudice
- Assumed expectations
- Choices made unknowingly
- Context and surroundings
- Other types of influences that will always affect the creative process and the many choices you make
Working with creativity constraints

Understanding of the creative task you work on

Under-constrained
Too much creative freedom

Over-constrained
Too little creative freedom

Understanding of the individual intensity of the relevant constraints

Free
Flexible
Fixed
The ‘sweet spot’ of constraints

Perceived potential for creativity

High

Your individual creative ‘sweet spot’

Under-constrained
Invent, add constraints

Over-constrained
Ignore, remove constraints

Low

Level of constraint intensity

High

