

石川 将也

Masaya Ishikawa

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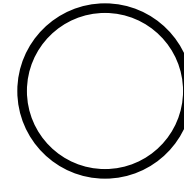
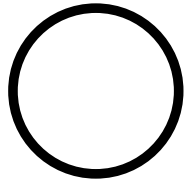
田谷 修一郎

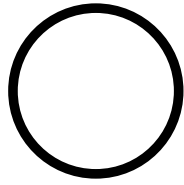
Shuichiro Taya

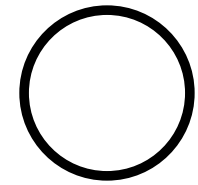
design and

cognition

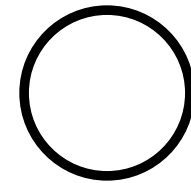
*06 motion cognition
in depth*





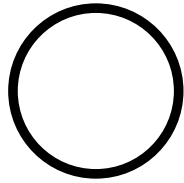


apparent motion

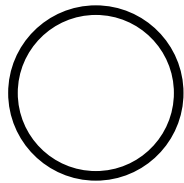


apparent motion

apparent motion



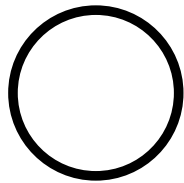
this is apparent motion too.



In psychological studies, **blank frames** are inserted to differentiate from real motion.

even though, apparent motion occurs.

this is **apparent motion** too.



Norman McLaren

Blinkity Blank (1955)

In psychological studies, **blank frames** are inserted to differentiate from real motion.

even though, apparent motion occurs.

apparent motion

apparent motion

real motion

continuous motion

apparent motion

Both apparent and real motion **are processed** by the **same visual system**.

= The perception of **real motion is also complemented by the brain**.



•

real motion
continuous motion

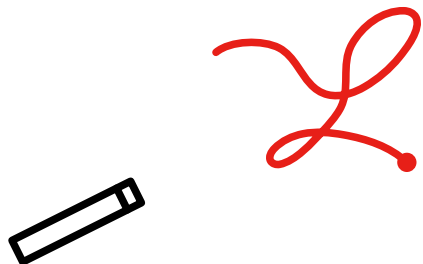
apparent motion

Both apparent and real motion **are processed** by the **same visual system**.

= The perception of **real motion is also complemented by the brain**.

**Persistence
of Vision**

Real motion also **cannot be perceived** if it is too fast or too slow.



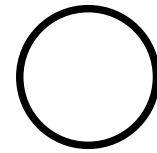
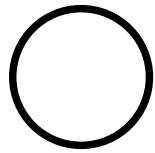
real motion
continuous motion

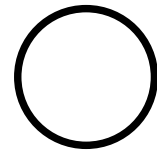
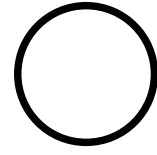
apparent motion

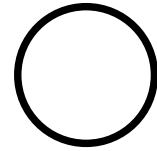
coresponding problem

Our visual system **instantly interprets the movement** and derives a corresponding representation.

However, it is **not** always the case that representations appear “as drawn” or “as the difference”.

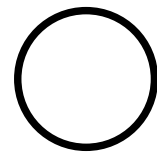


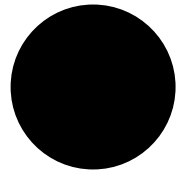
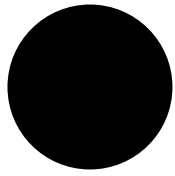
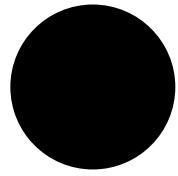


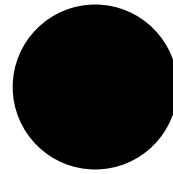
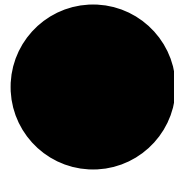
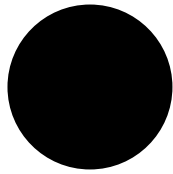


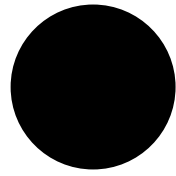
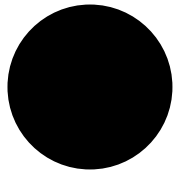
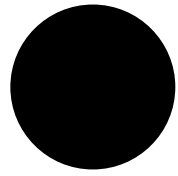
However, the **response changes depending on the** conditions under which the **stimulus** is presented (time, size, etc...).

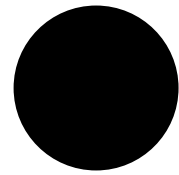
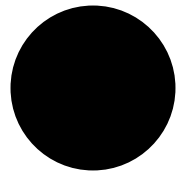
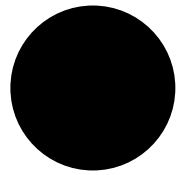
The techniques of **animation make use of these functions** of the human visual system.

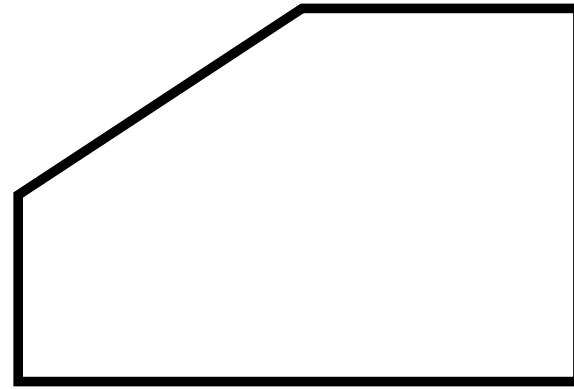
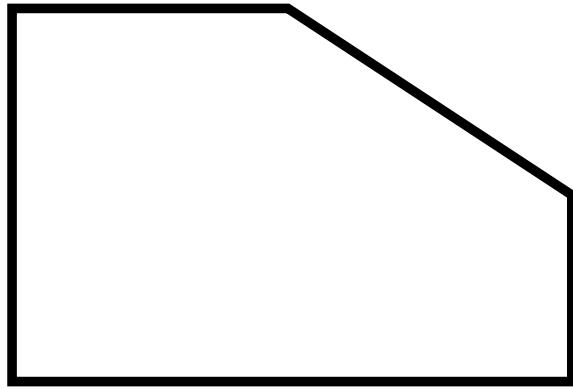


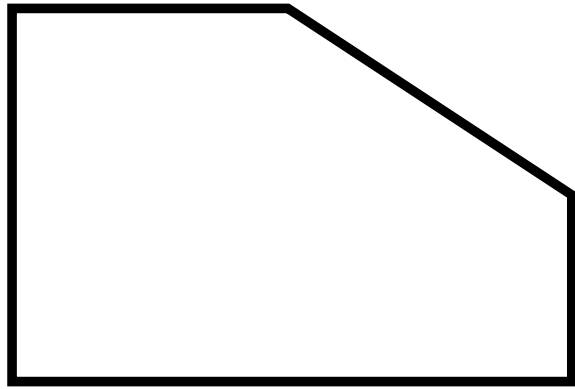


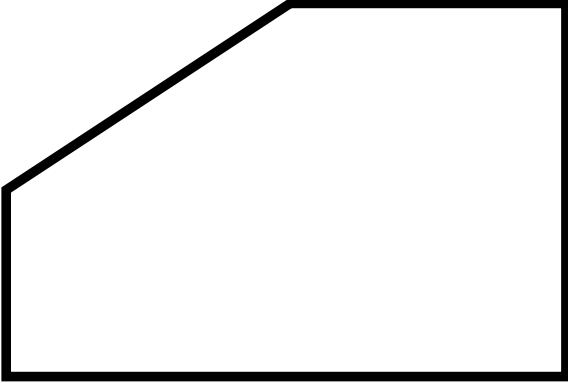


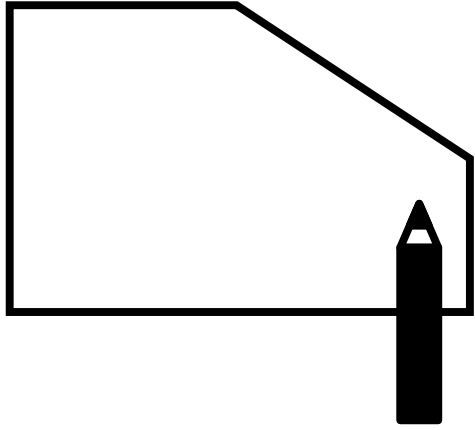


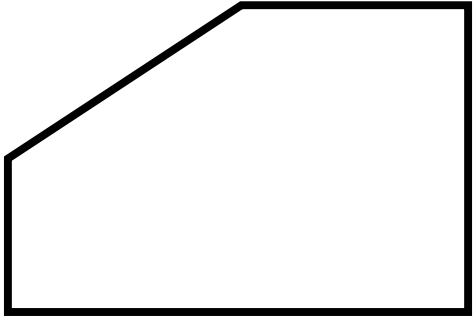


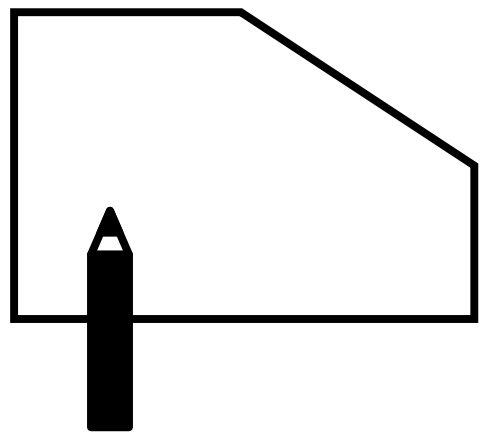


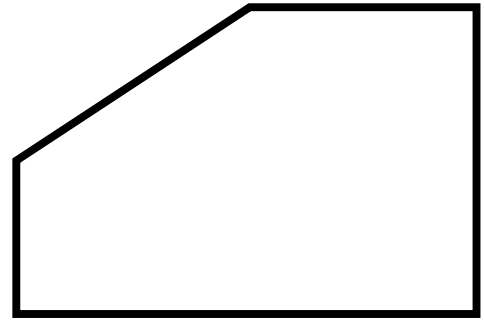


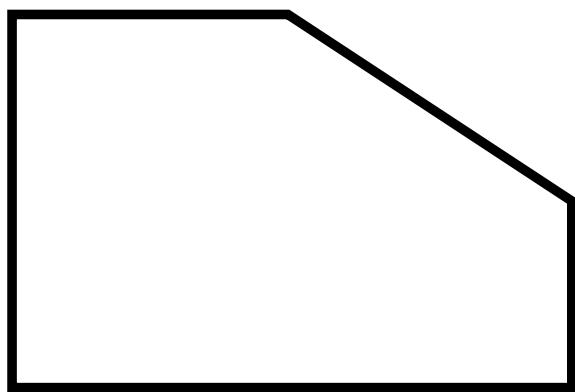


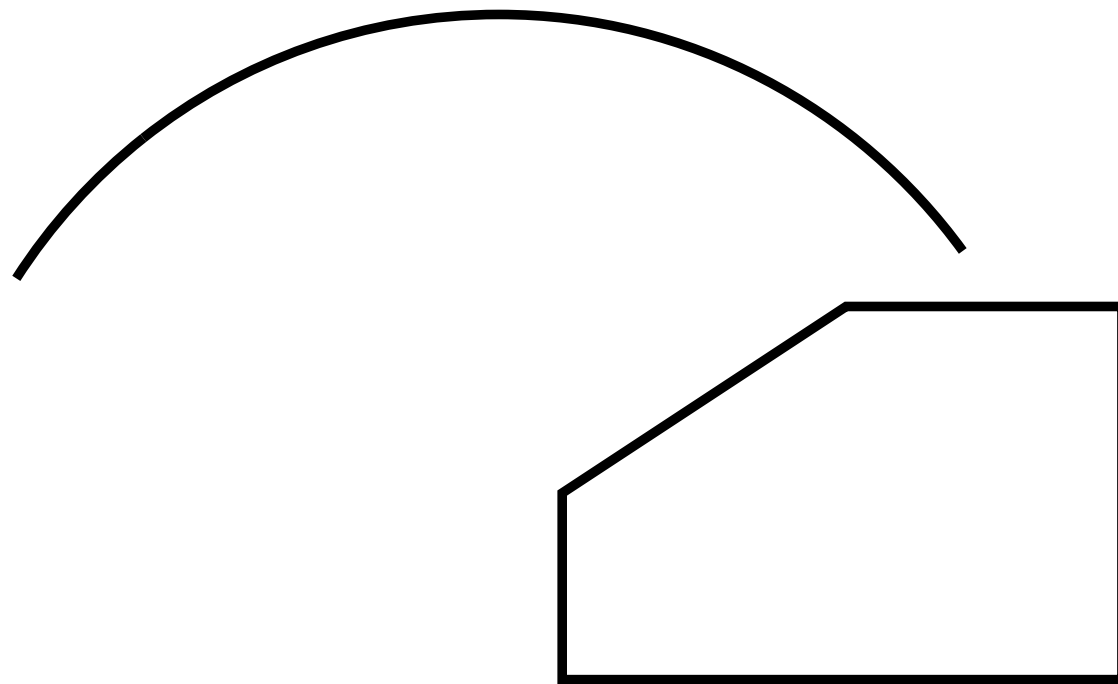


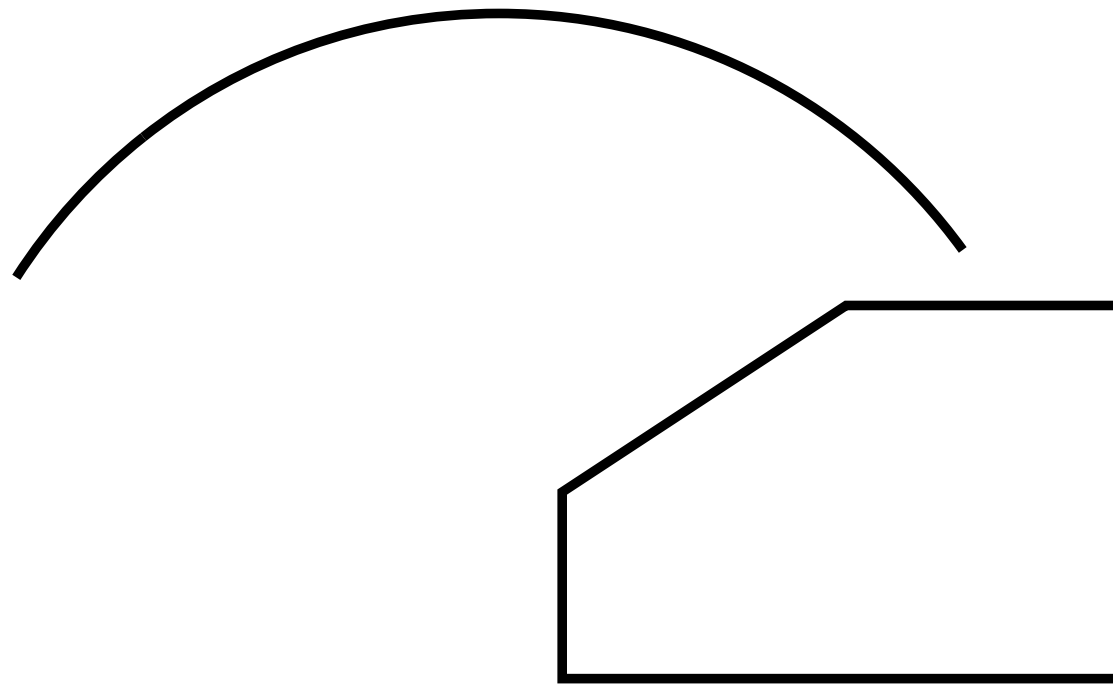












Norman McLaren

Animation is not the art of drawings that move **but the art of movements that are drawn. What happens between each frame is much more important than what exists on each frame** ... Animation is therefore the art of manipulating the invisible interstices that lie between frames .











line motion effect

Attention affects the perception of movement.



Miyauchi, Shimojo, & Hikosaka, 1991

line motion effect

Attention affects the perception of movement.



Miyauchi, Shimojo, & Hikosaka, 1991

ウルトラマン・ゼンブ MV

監督：小沢健二 映像：小沢健二グラフィックバンド

line motion effect

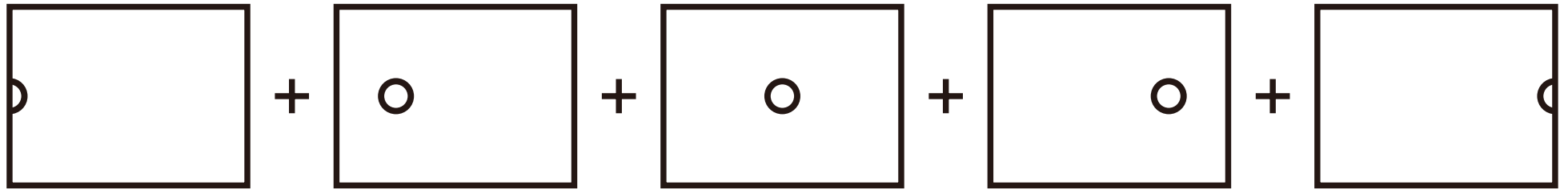
Attention affects the perception of movement.



Miyauchi, Shimojo, & Hikosaka, 1991

Backward illusory line motion

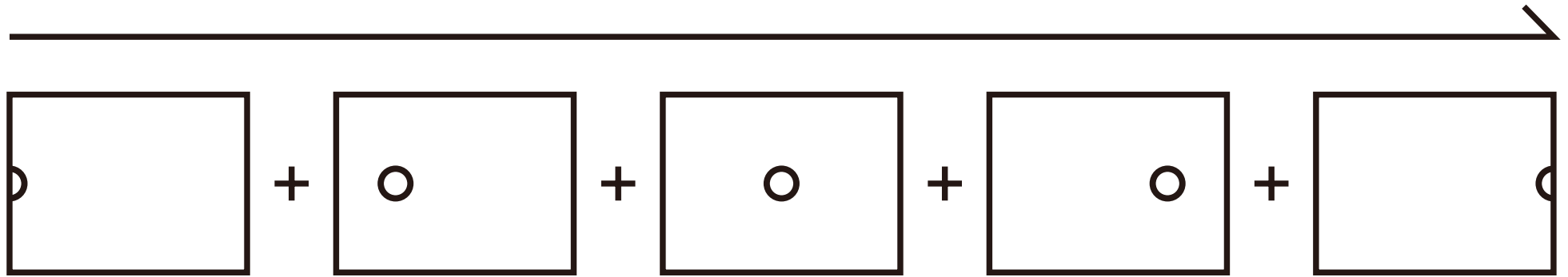
Fuminori Ono, Yuki Yamada, Kohske Takahashi,
Kyoshiro Sasaki; Atsunori Ariga, 2023



A movement is created by an
after-the-fact clue.

Backward illusory line motion

Fuminori Ono, Yuki Yamada, Kohske Takahashi,
Kyoshiro Sasaki; Atsunori Ariga, 2023

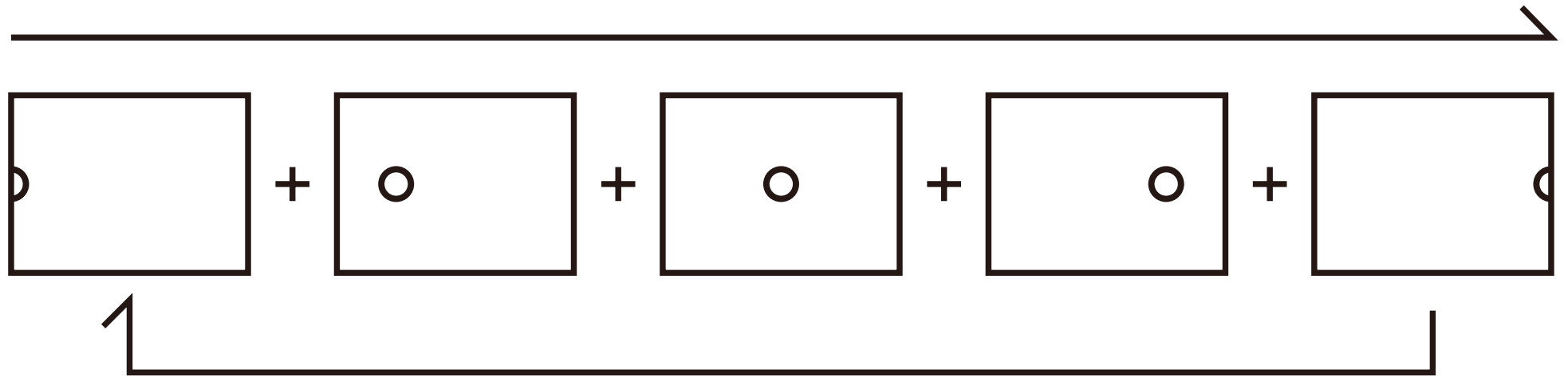


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motion representation is not always a stack

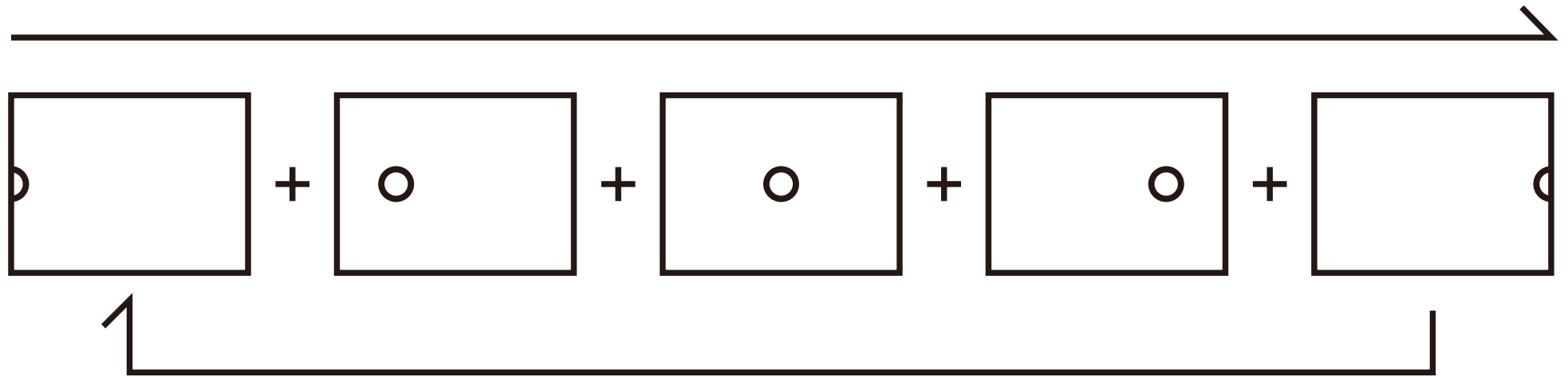


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motion representation is not always a stack
the newest information is not the current representation.

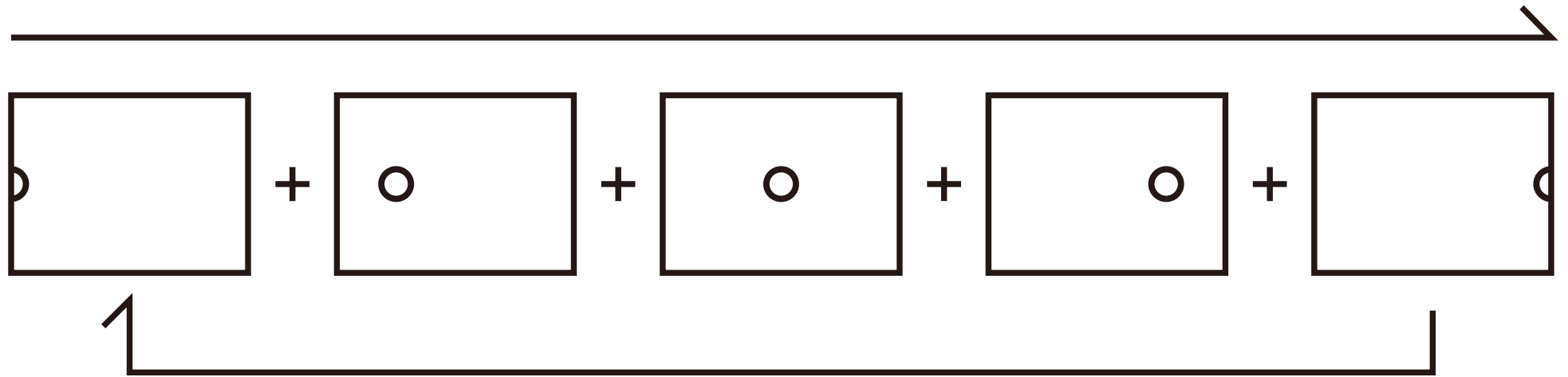


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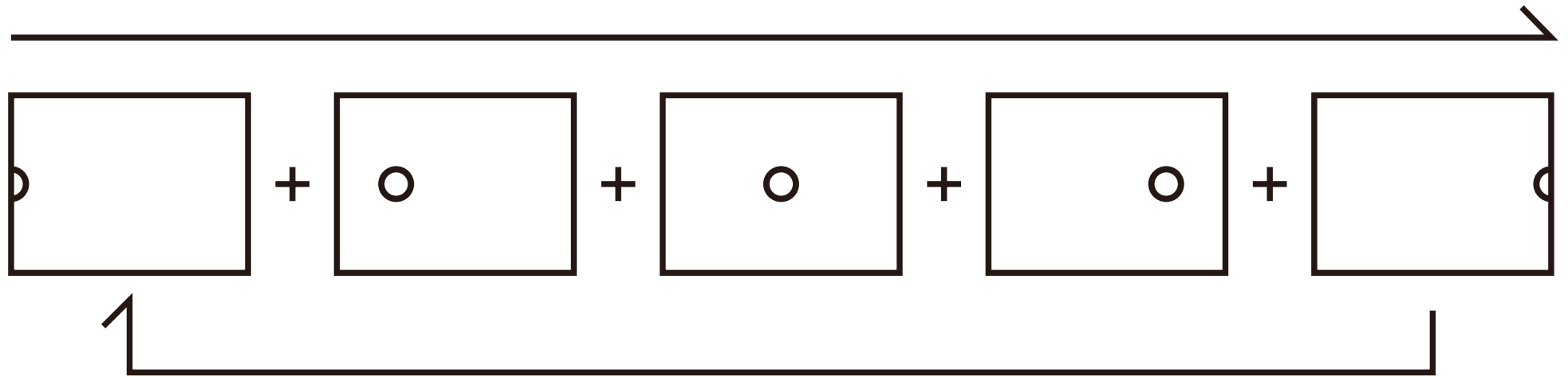
motion representation is not always a stack
the newest information is not the current representation.



A movement is created by an
after-the-fact clue.

we **predict the present** and
reconstruct the past.

motion representation is not always a stack
the newest information is not the current representation.



A movement is created by an
after-the-fact clue.

we **predict the present** and
reconstruct the past.

flash lag effect

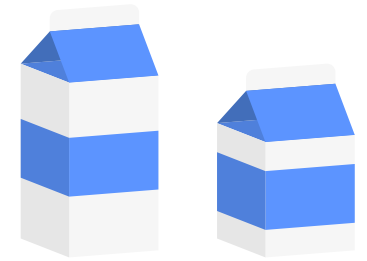
Nijhawan, R. (1992).

assignment

stopmotion animation using

similar objects

group work



Find **similar shaped ready-made objects** that can be animated by replacing it (like nails and milk carton) and **make a loop animation** .

point

5/15 shoot

bring the objects

30min

5/22 review

- combine pixilation to **overcome the shortage of the number of objects.**
- make use of animation tech such as **anticipation.**
- be aware of the fact that **movement takes precedence over form.**

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+

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Shuichiro Taya

design and

cognition

*06 motion cognition
in depth*

