GD5368

Motion Graphics (MoGraph) Week2

QUESTIONS?

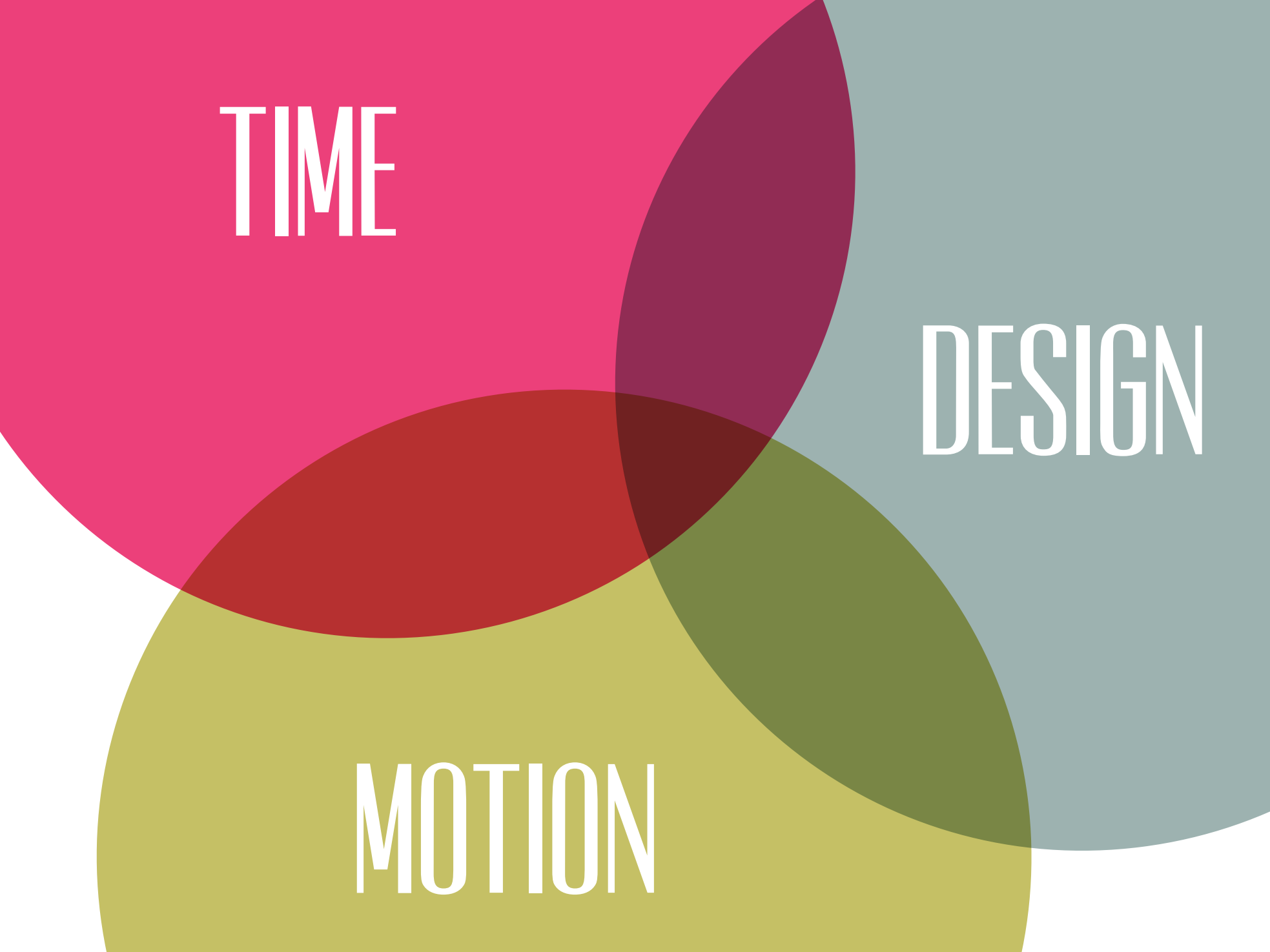
FROM LAST WEEK OR ANYTHING ELSE?

A Line is a Dot that went for a walk.

— PAUL KLEE

Every drawing can be understood as a *motion study* since it is a *path of motion* recorded by graphic means.

— LÁZLÓ MOHOLY-NAGY


TIME
DESIGN
MOTION

MOTION GRAPHICS

GD5368 - Motion Graphics

Time + Motion + Graphic Design

MAIN POINTS:

1. Discuss time + motion principles

2. Figure out how to apply T+M principles to all your different kinds of work.

that is all …

Motion Produces Relationships

—

One thing moves, others don’t.
One thing moves, others resist.
One thing moves, others follow.
etc.

so, what is

“Motion Graphics?”

it's like pornography:

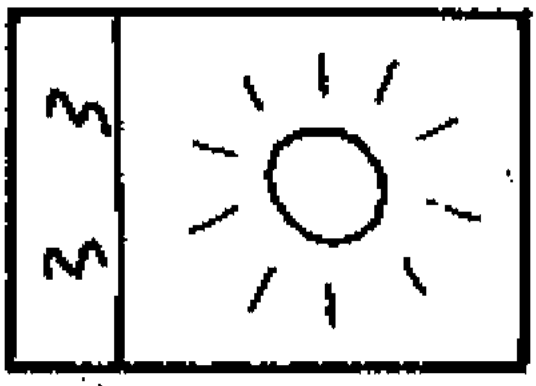
"[You] Know It When You See It"

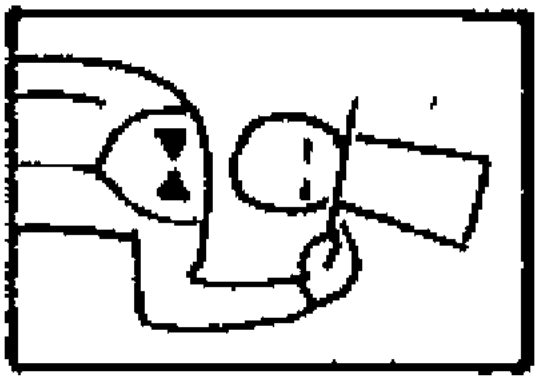
— Supreme Court Justice Potter Stewart

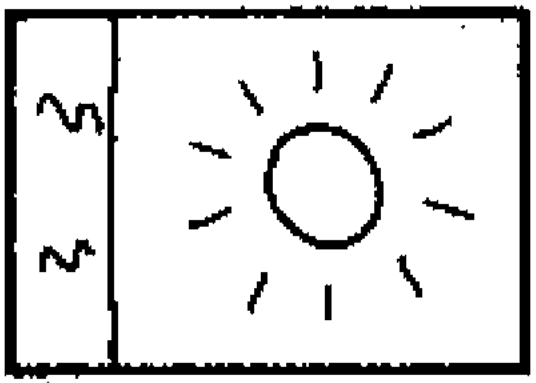
ALSO DESCRIBED BY THE PHRASE

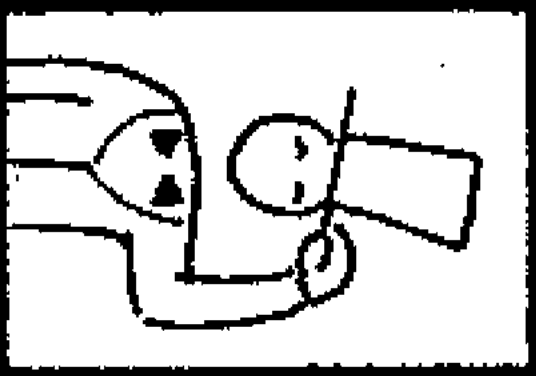
SEQUENTIAL ART!

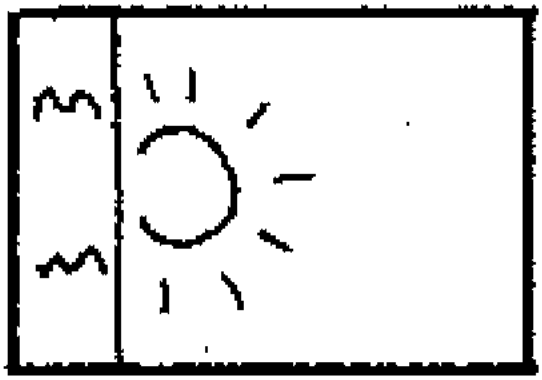
(SEQUENCED IN TIME)

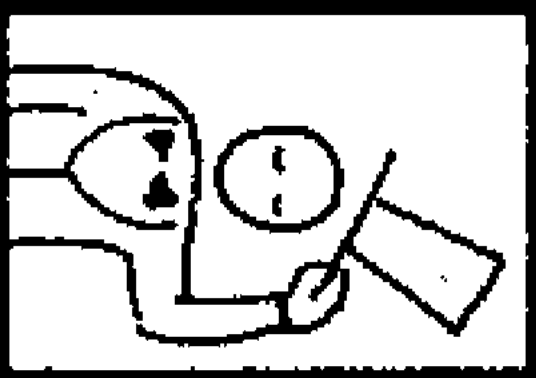












Why are Time + Motion Useful?

1. To represent something with actual duration– something that actually exists in time…

2. Make a piece emotive in a way Static Imagery cannot.

3. Make relation-ships in time, not just in space.

4. Allow for Narra-tive or story …

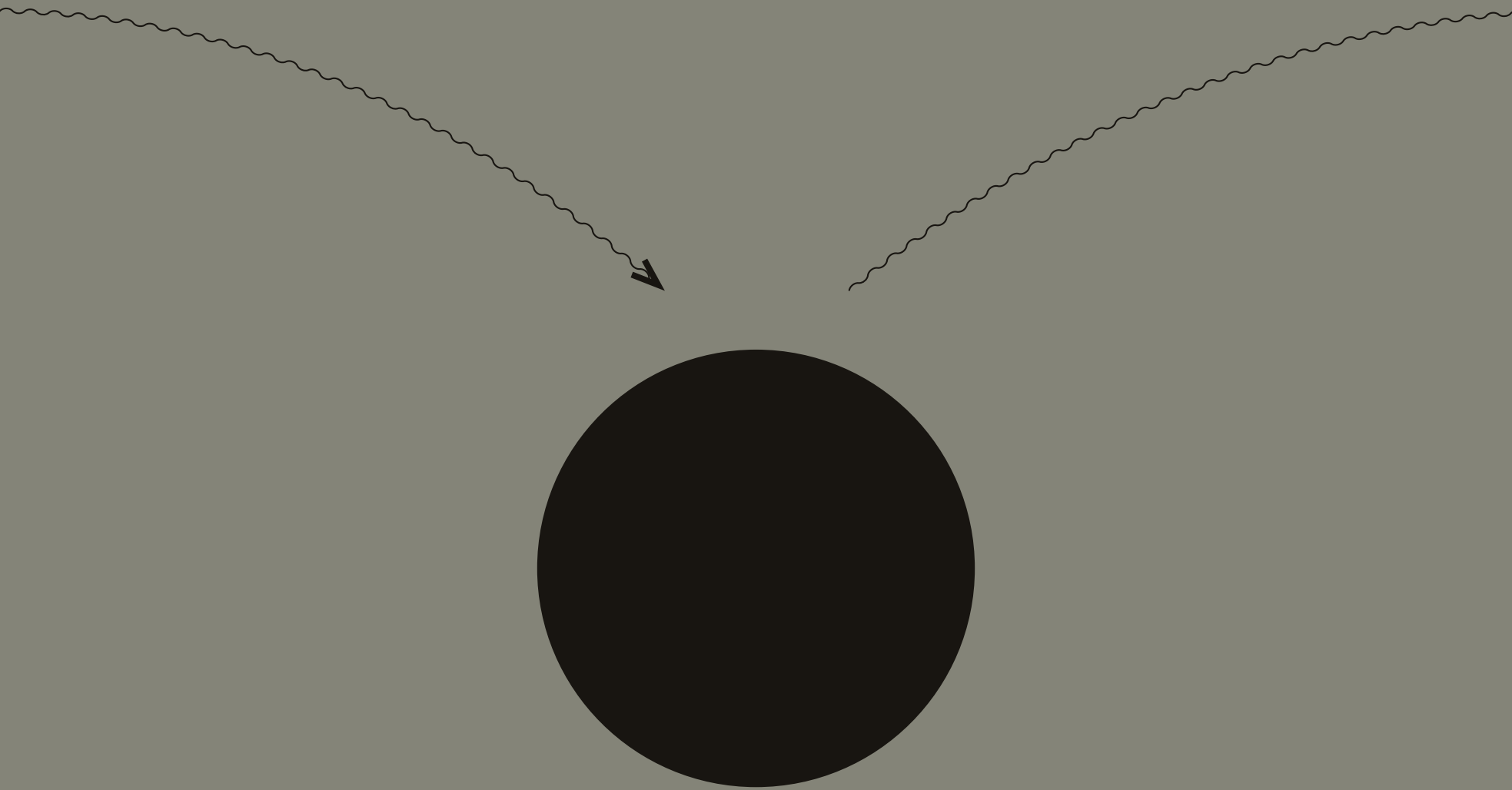
5. Pacing, Tempo, Emphasis, ...

6. Motion (or “Time”) adds something else

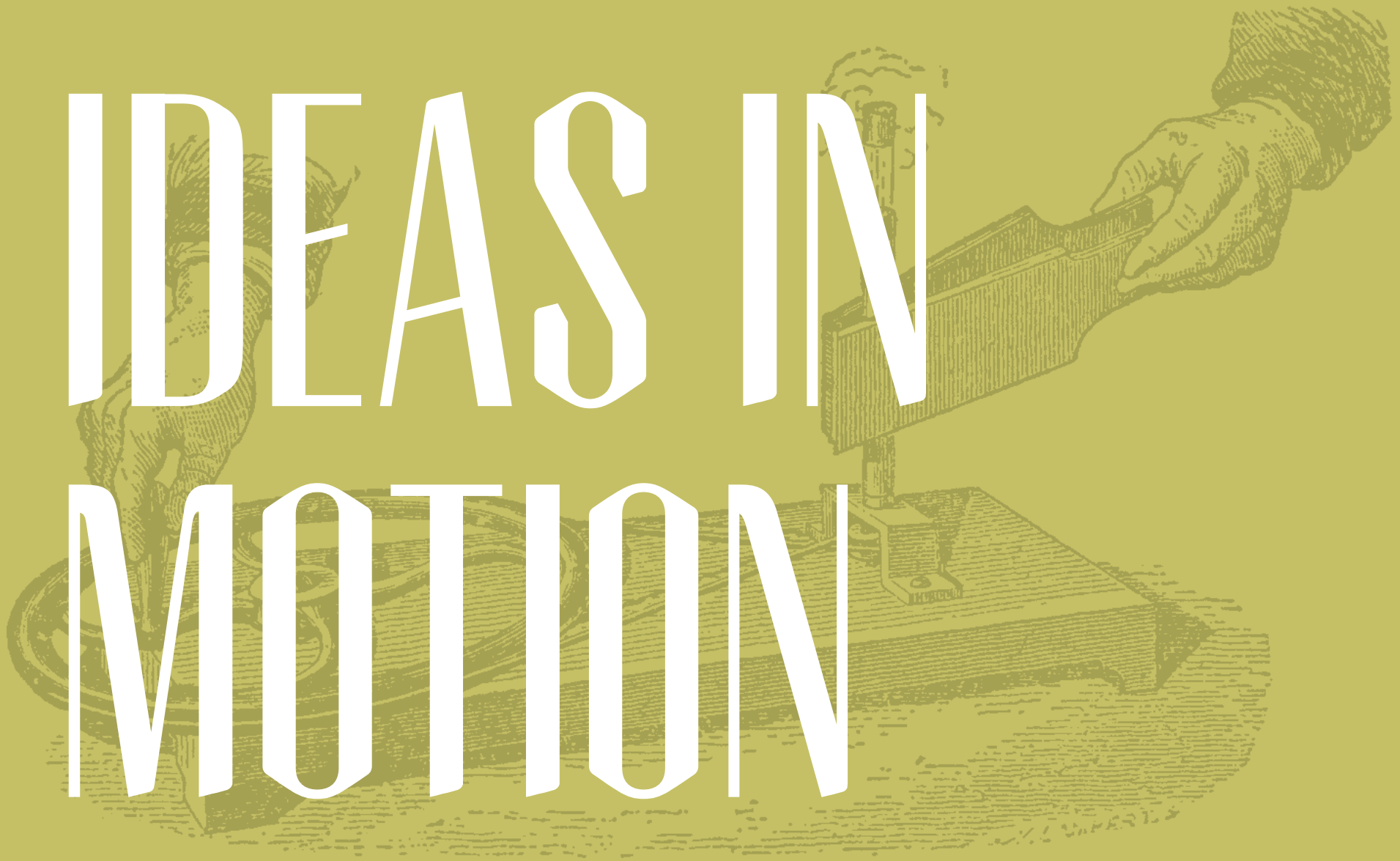
Normal Design does this for static imagery all the time ...

There are probably more …

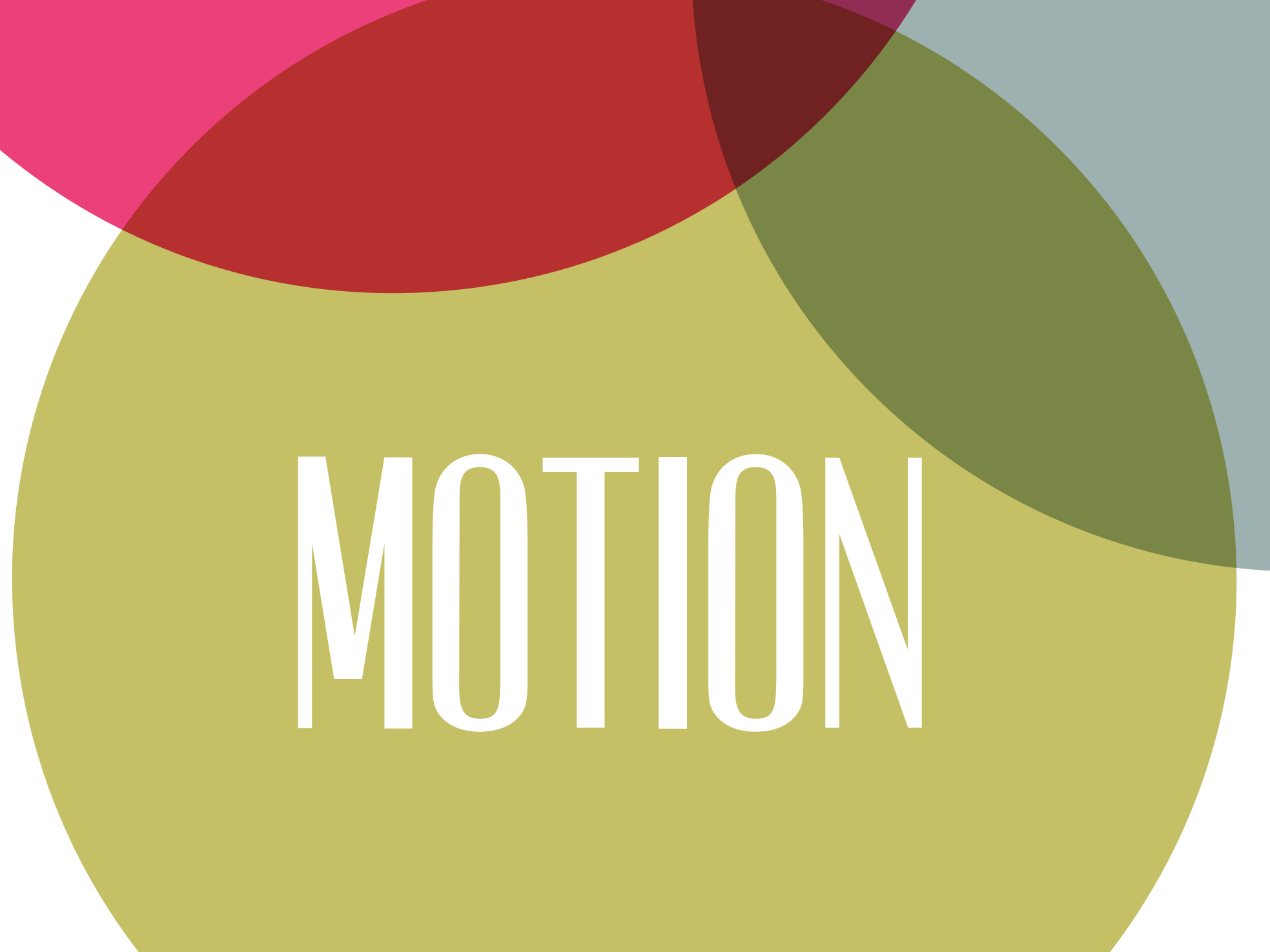
QUESTIONS?



IDEAS IN MOTION



MOTION GRAPHICS


MOTION

DEFINITION:

Motion:

a change in place or location

SLIGHTLY BETTER MOGRAPH DEFINITION:

Motion:

a change in place or location over time …

* This is technically “velocity” in physics

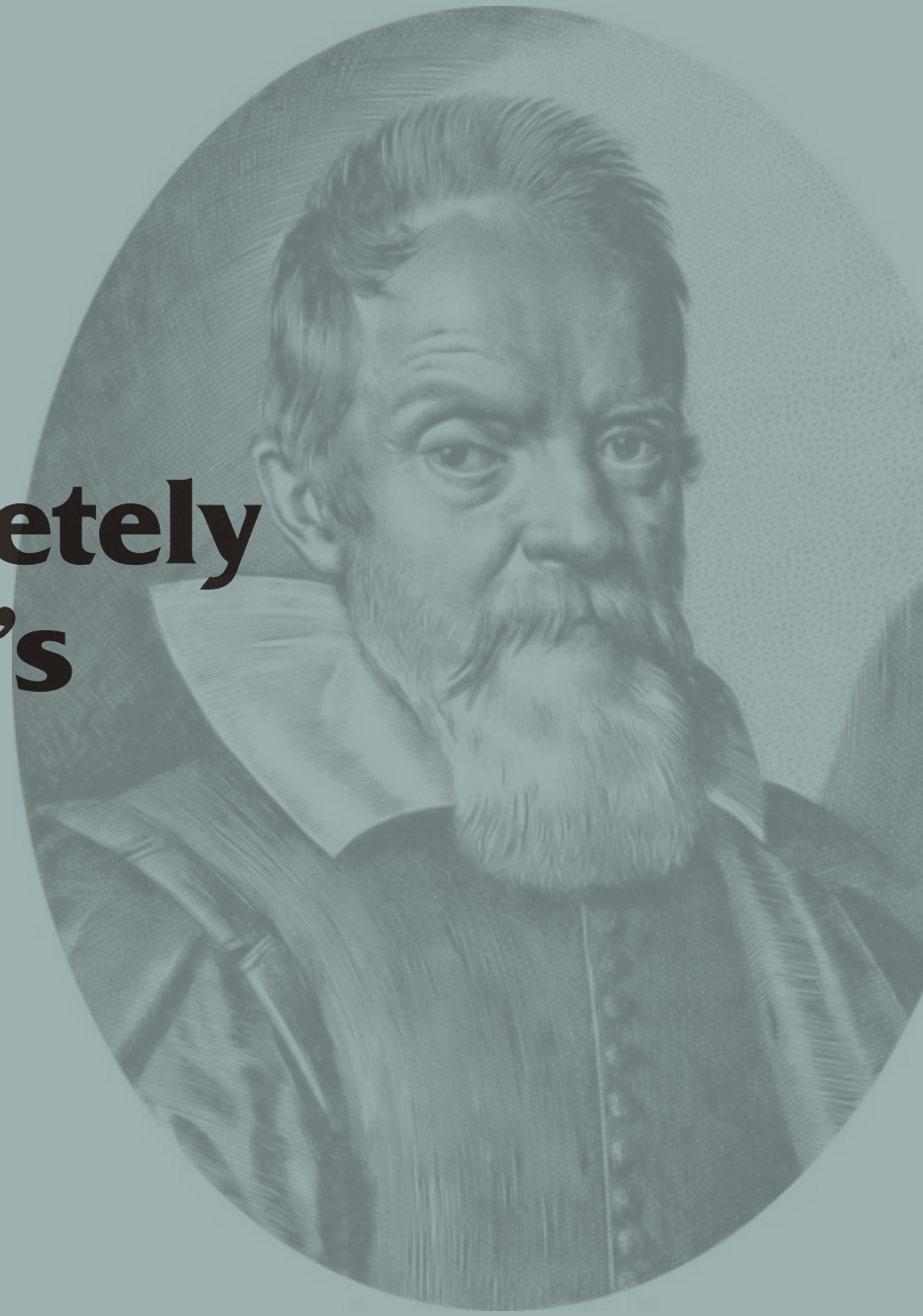
HISTORICAL + THEORETICAL CONTEXT

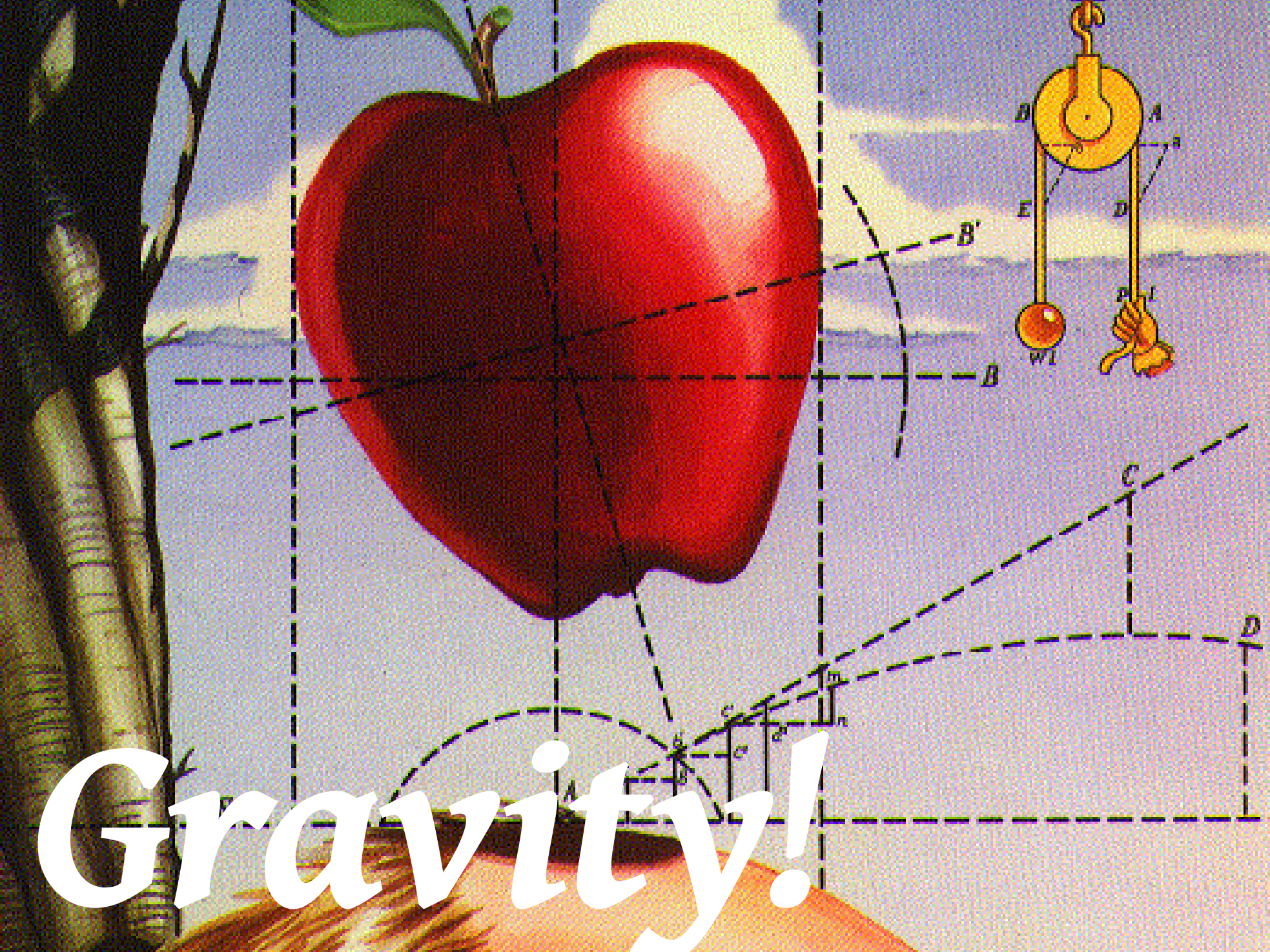
Newton

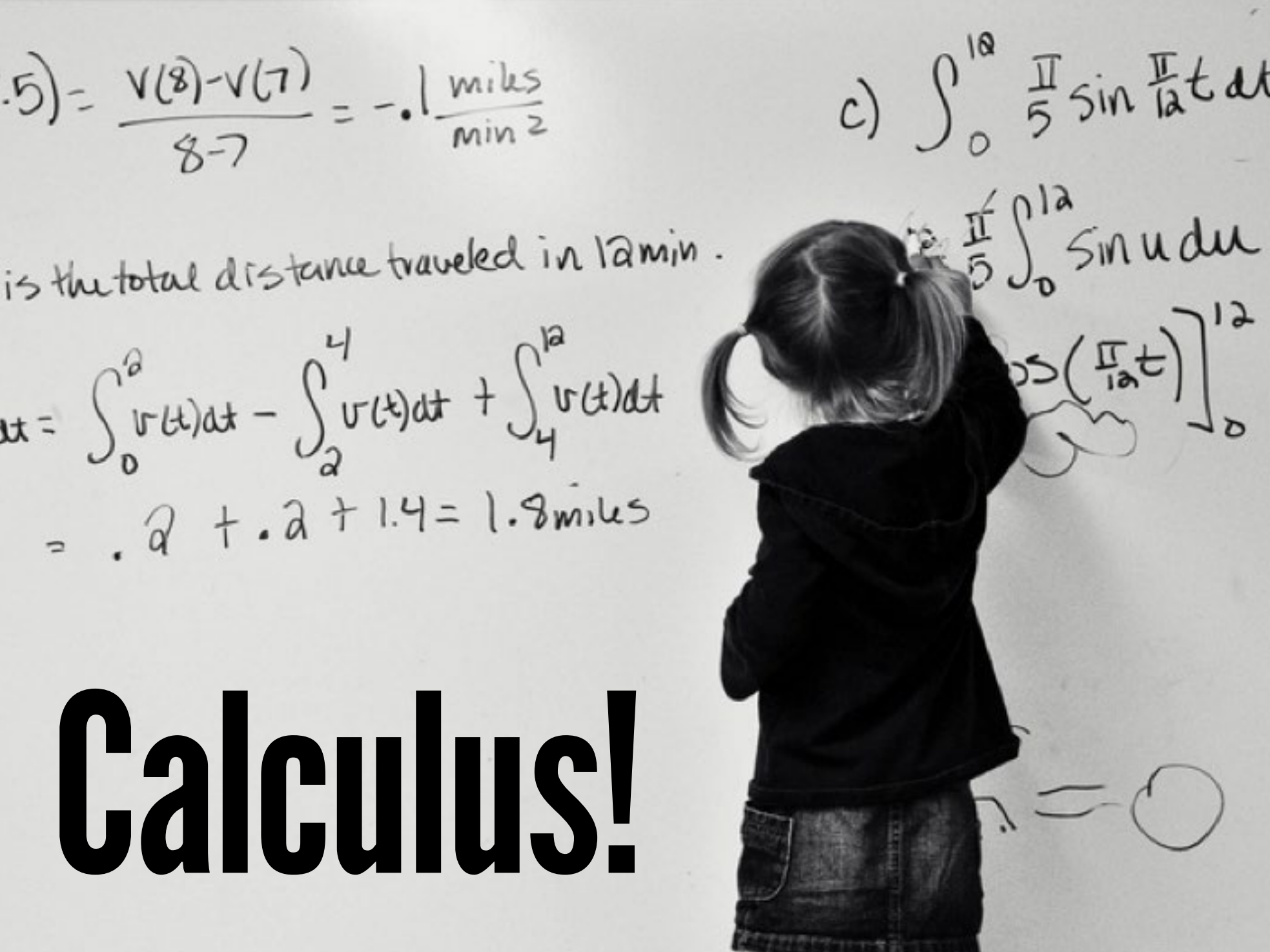
(newtonian mechanics)

Sir Isaac Newton

Newton really just more concretely phrased Galileo's thinking on the subjects …

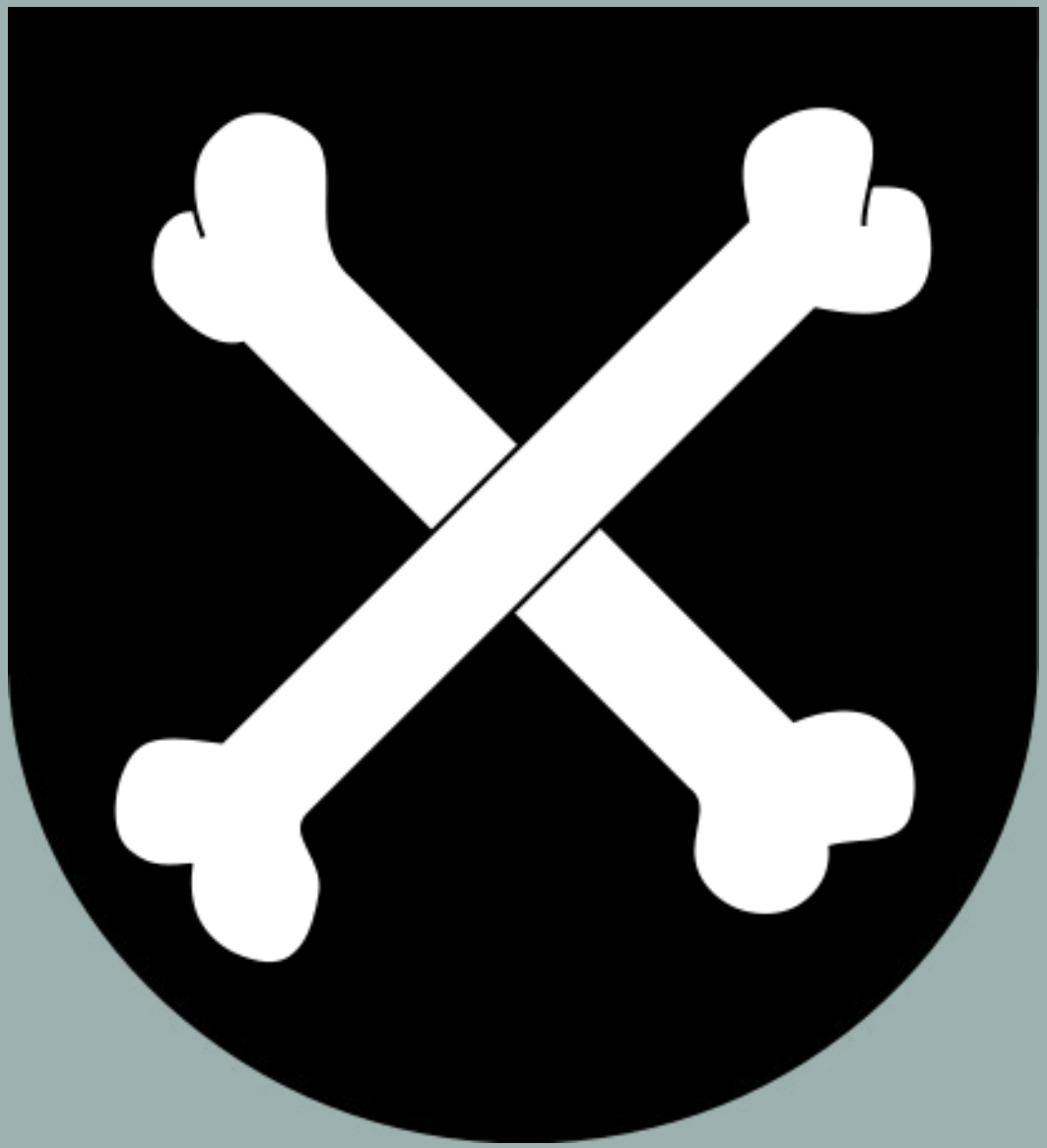



B
A
E
D
B'
W.L
B
C
D
Gravity!


.5) = $\frac{v(8)-v(7)}{8-7} = -.1 \frac{\text{miles}}{\text{min}^2}$
c) $\int_0^{10} \frac{\pi}{5} \sin \frac{\pi}{12} t \, dt$
$\frac{\pi}{5} \int_0^{12} \sin u \, du$
$\cos\left(\frac{\pi}{12} t\right)\Big]_0^{12}$
is the total distance traveled in 12 min.
$\int_0^{2} v(t)dt - \int_2^{4} v(t)dt + \int_4^{12} v(t)dt$
$= .2 + .2 + 1.4 = 1.8 \text{ miles}$
Calculus!

Newton Disc

PERSISTANCE OF VISION



Newton's 3 Laws of Motion

These rules hold true for any normal motions …

as long as they are on regular everyday physical stuff, and that stuff is not too big, not too small, nor going very fast... (like nearly the speed of light)


USA

LAW 1:

An object in motion (or rest) stays at motion (or rest) until acted upon by an outside force.

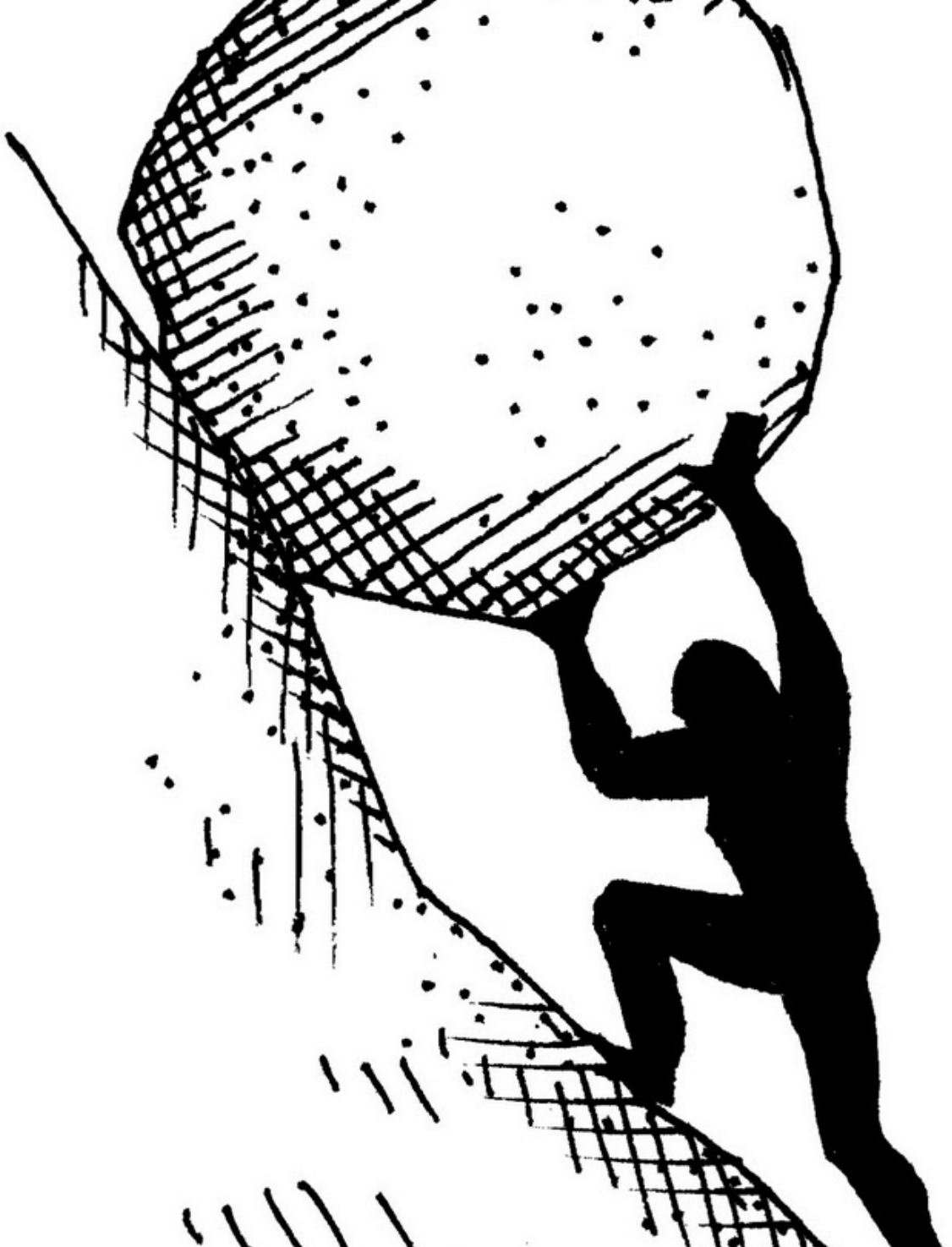
Objects in motion have momentum

Objects at rest have inertia

LAW 2:

An applied force on an object equals the rate of change of its momentum over time *or* F=m*a

Heavier objects require more force to move the same speed as lighter objects



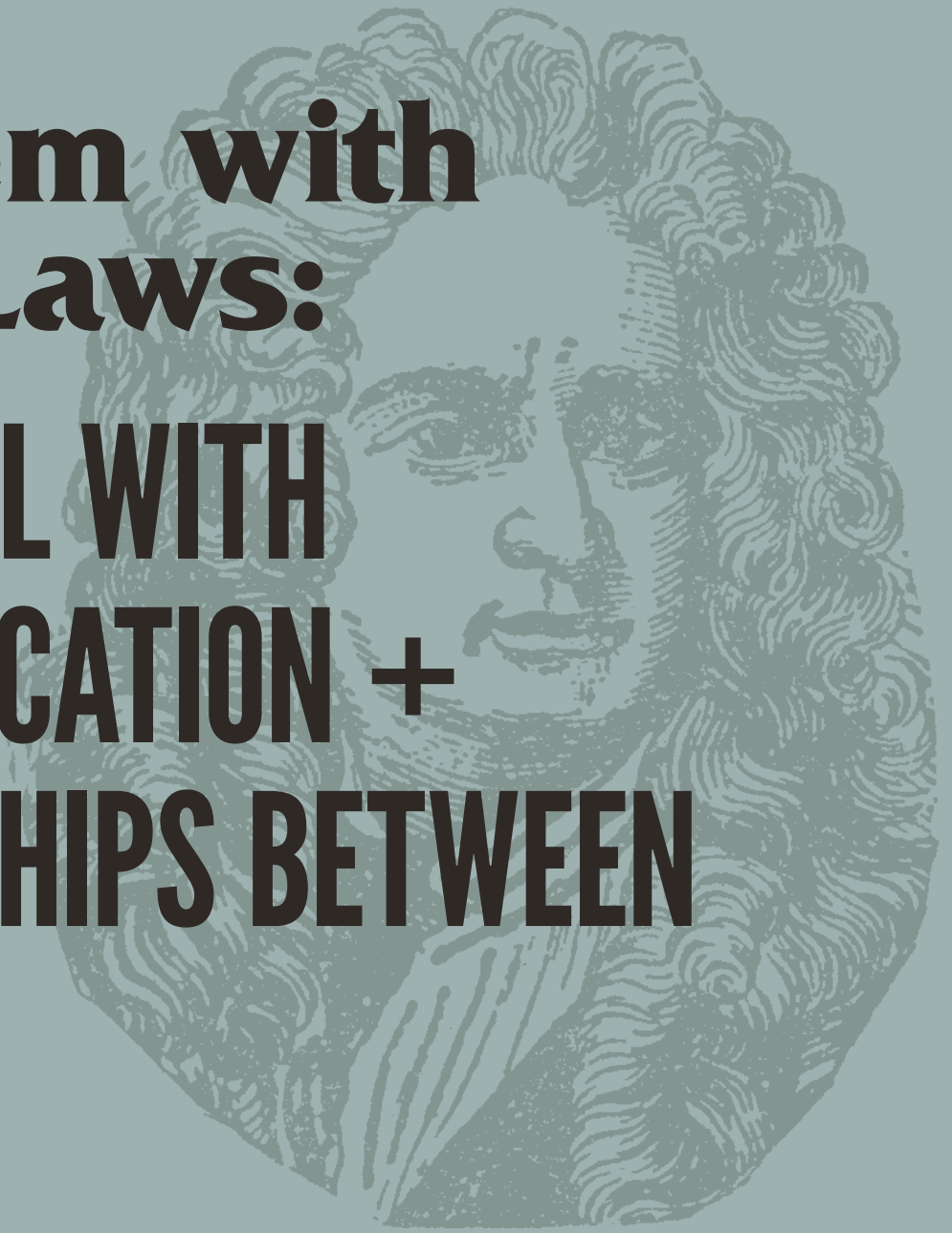
LAW 3:

For every action there is an equal and opposite reaction.


USA


15

The problem with Newton's Laws:



THEY ONLY DEAL WITH CHANGES IN LOCATION + THE RELATIONSHIPS BETWEEN OBJECTS ...

Aristotle

Aristotle used

MOTION

to describe any kind of

CHANGE

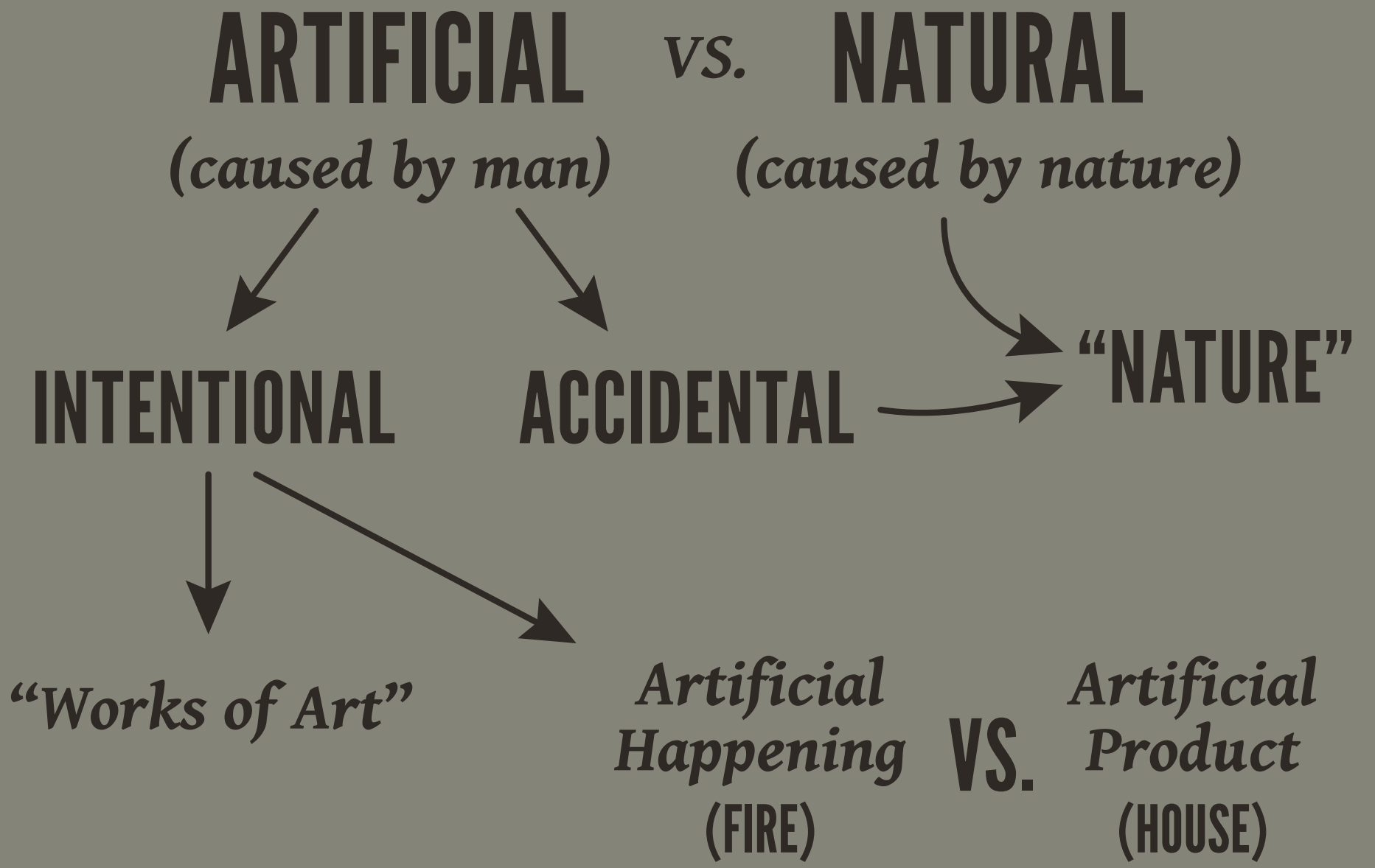
he describes 4 main kinds of

CHANGE

1. *Local Motion*
2. *Alteration*
3. *Growth*
4. *Coming to be & Passing Away*

also, he had multiple variants of each type of change based on his idea of

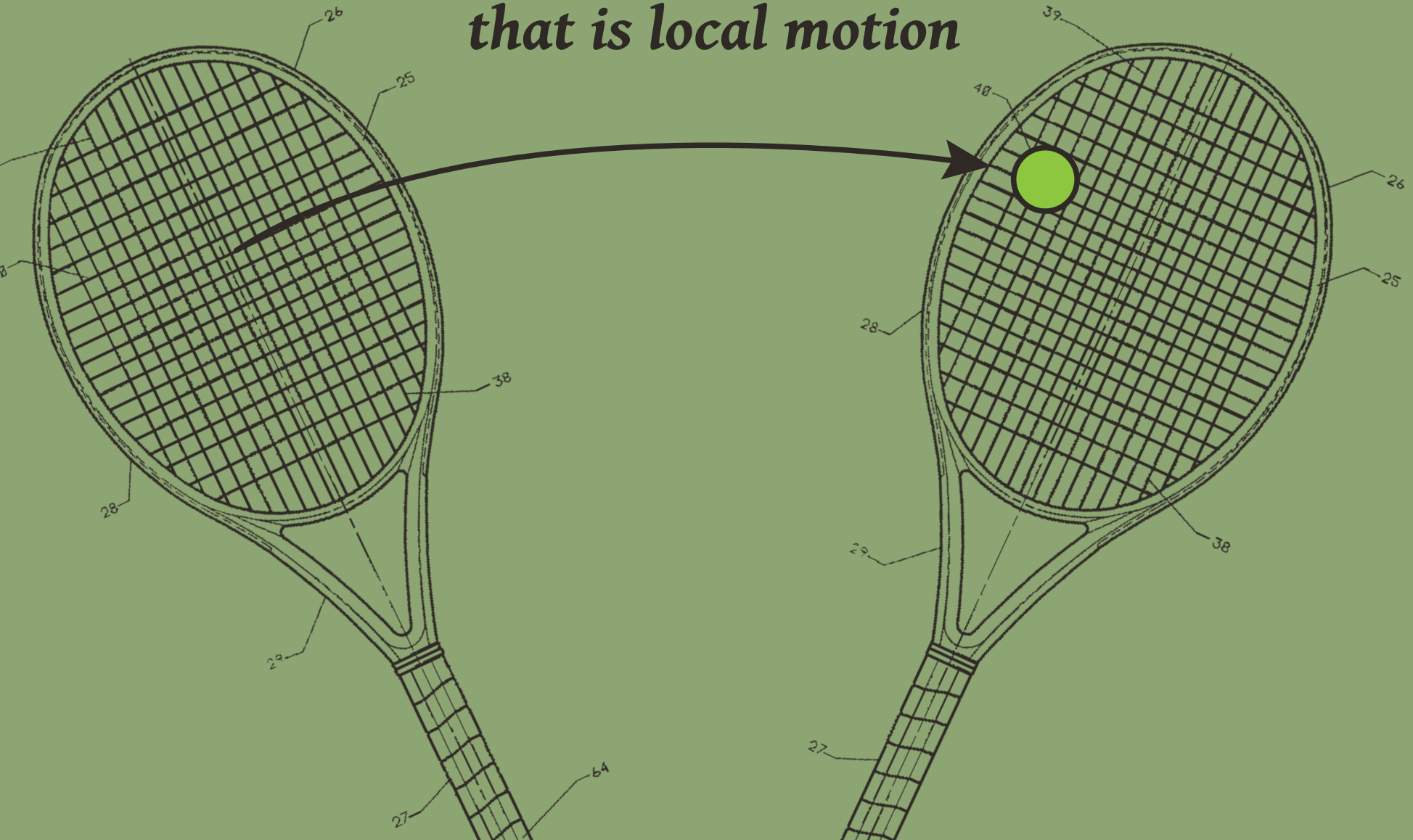
CAUSATION


ARTIFICIAL
(caused by man)
vs.
NATURAL
(caused by nature)
INTENTIONAL
ACCIDENTAL
"NATURE"
"Works of Art"
Artificial Happening
(FIRE)
VS.
Artificial Product
(HOUSE)

LOCAL MOTION

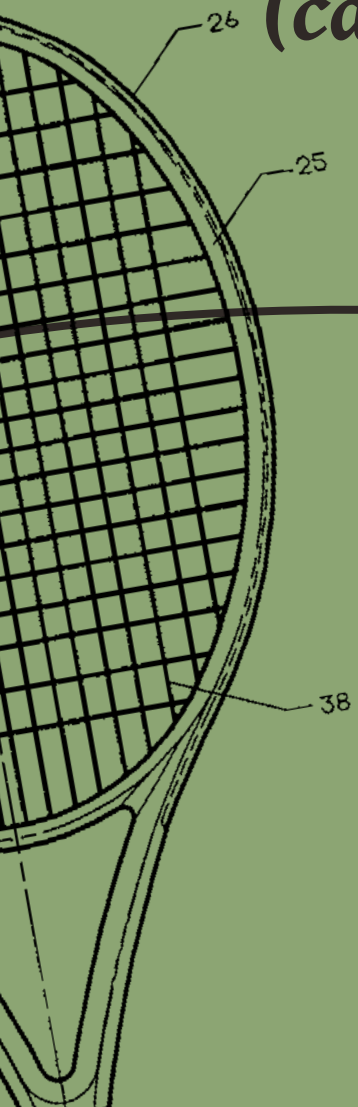
a change in place

the moving thing is the
unchanging subject of the change
that is local motion



ARTIFICIAL *vs.* NATURAL

(caused by man) *(caused by nature)*

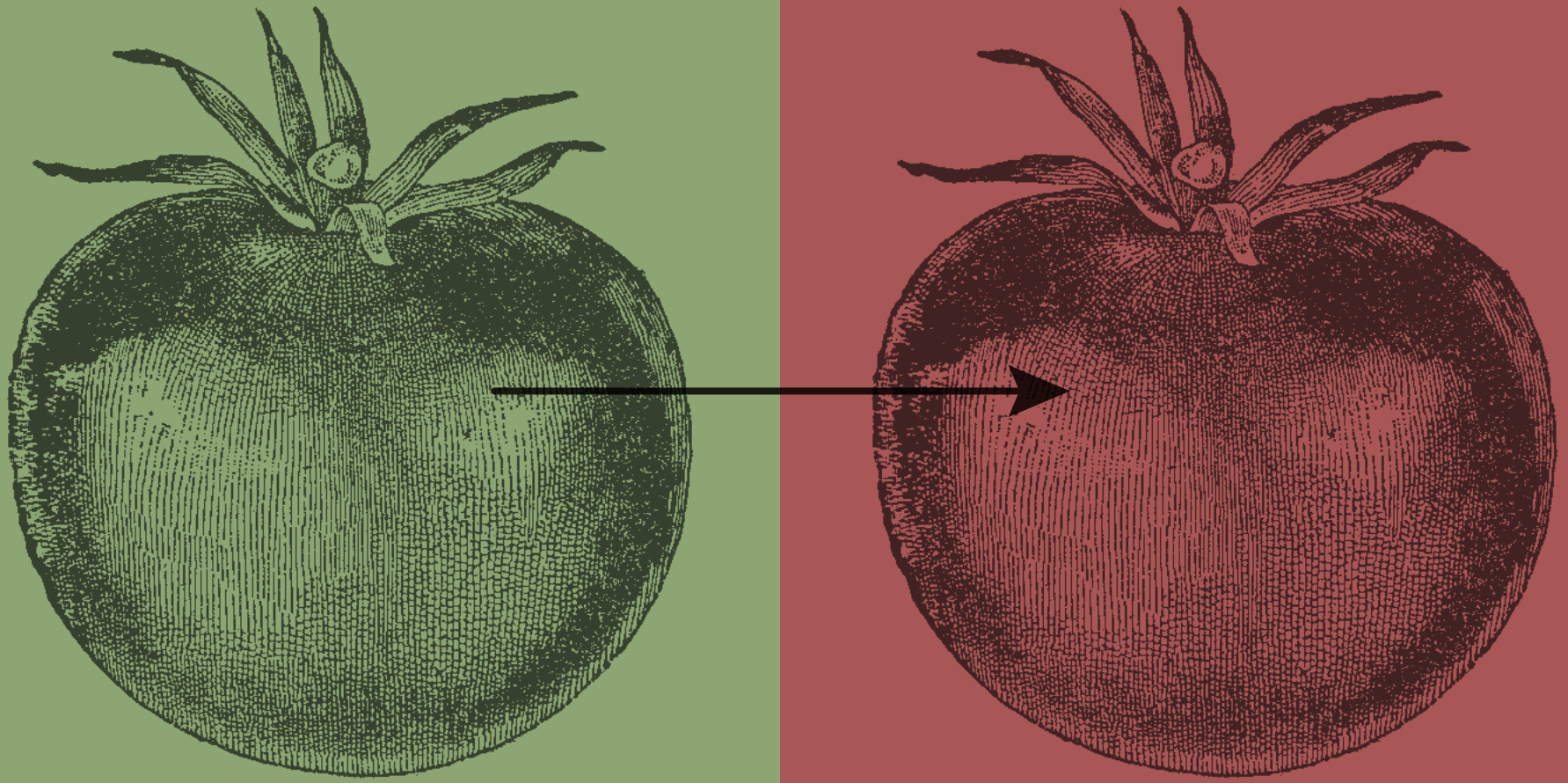


hitting vs. dropping

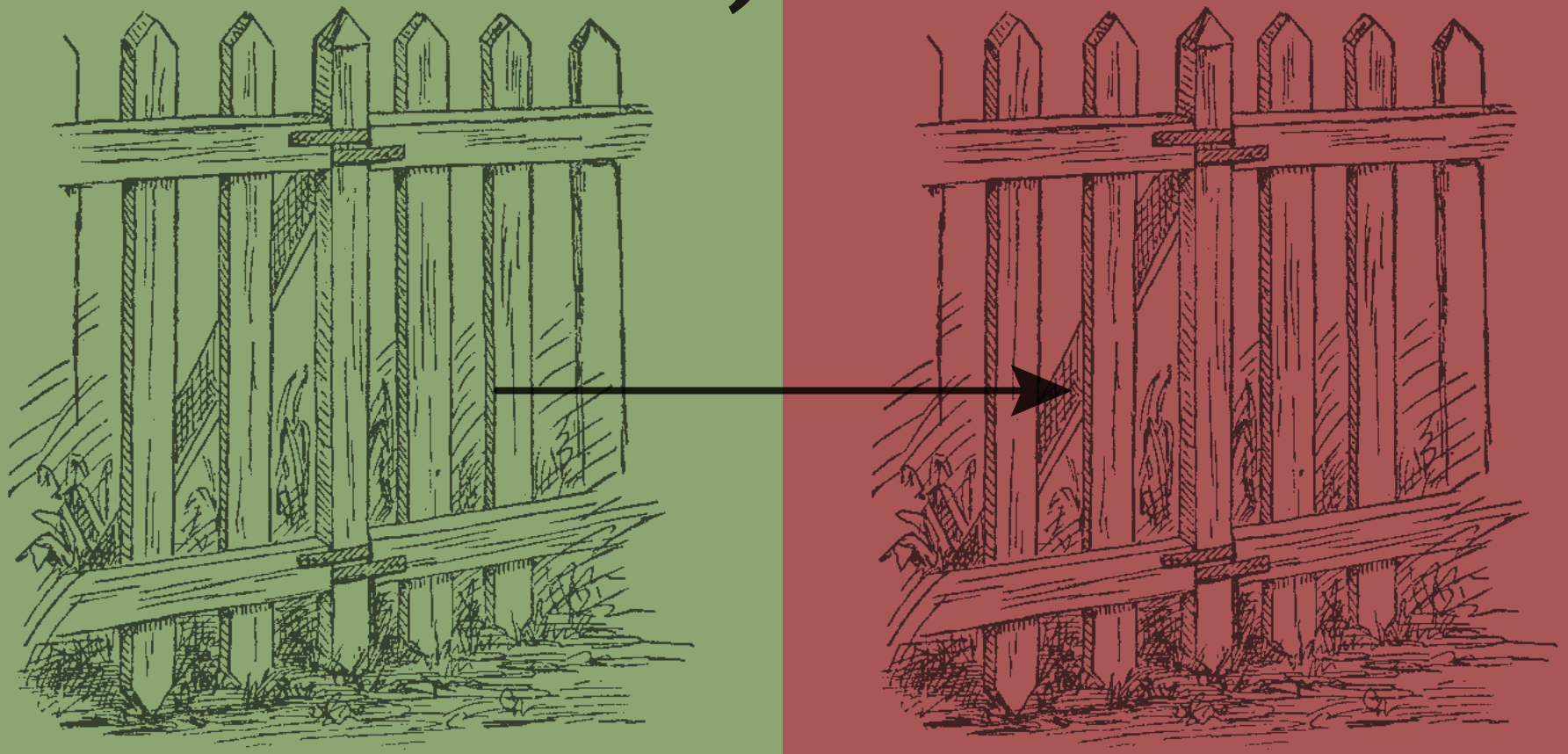
ALTERATION

a change in quality

natural



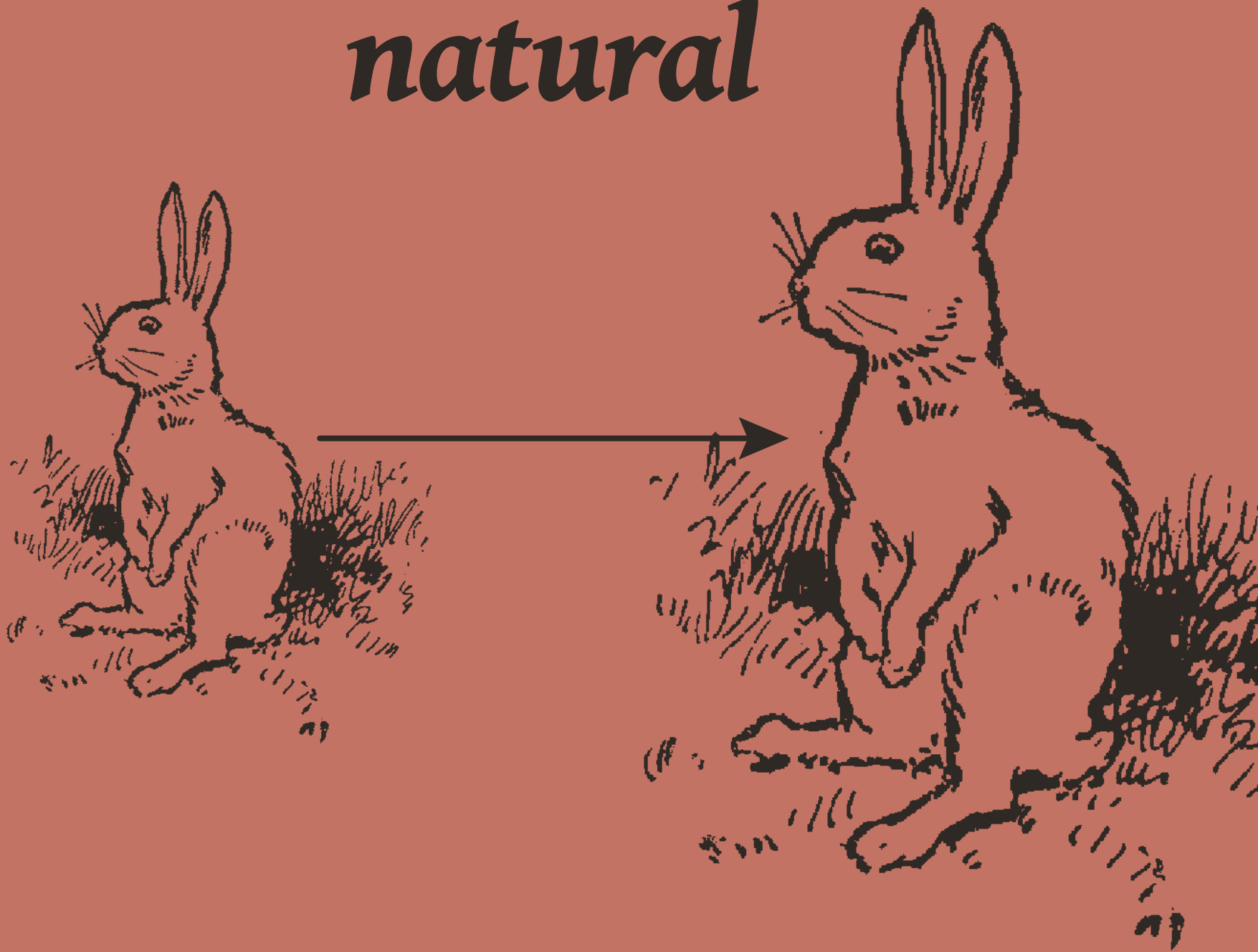
artificial



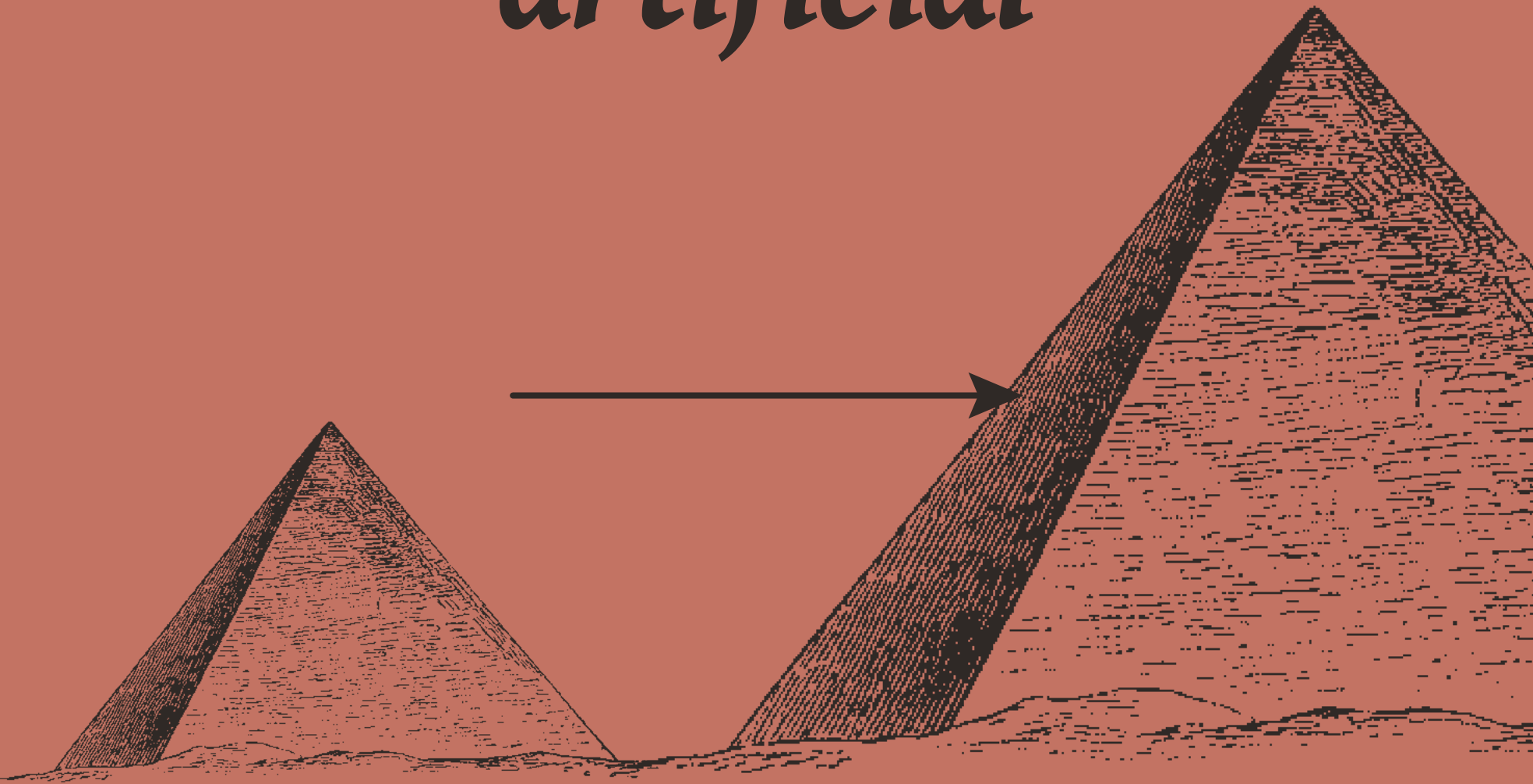
GROWTH

a change in quantity

natural

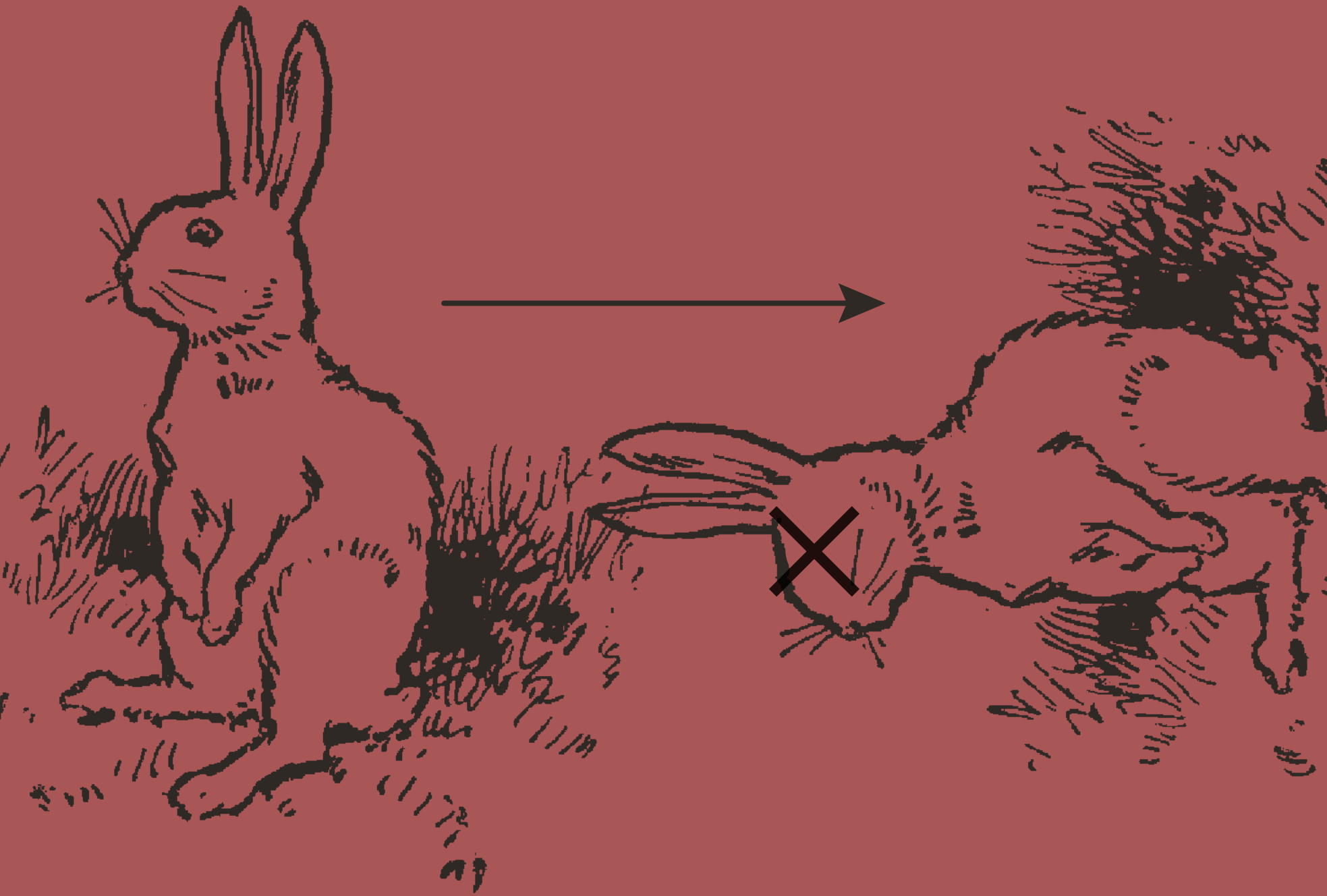


artificial



COMING TO BE & PASSING AWAY

a change in substance



THIS LAST CHANGE IS DIFFERENT IN THAT IT HAPPENS INSTANTLY, WHERE THE OTHERS HAPPEN OVER A PERIOD OF TIME

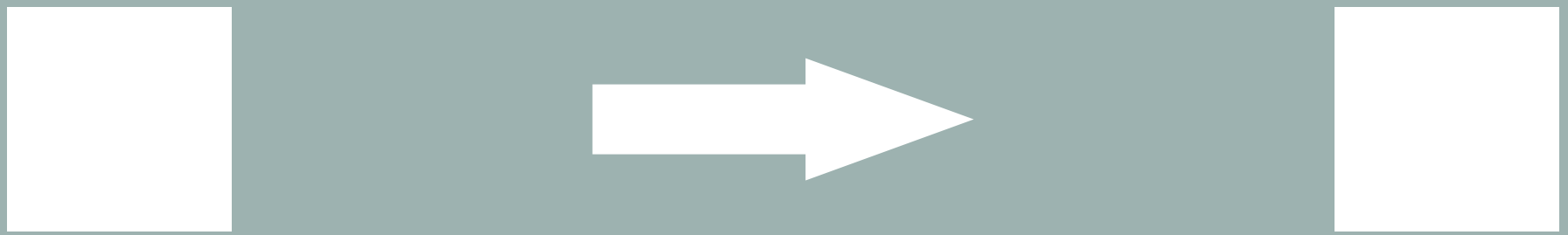
SO!

what does this have to do with **DESIGN?**

Basic forms of Motion …

Newton gives us

CHANGE IN POSITION

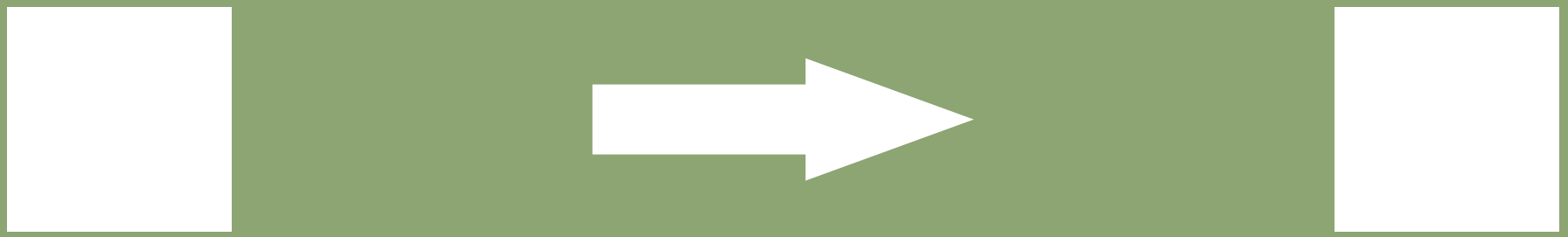


Aristotle confirms

CHANGE IN POSITION

With his thoughts on

LOCAL MOTION



Aristotle then adds

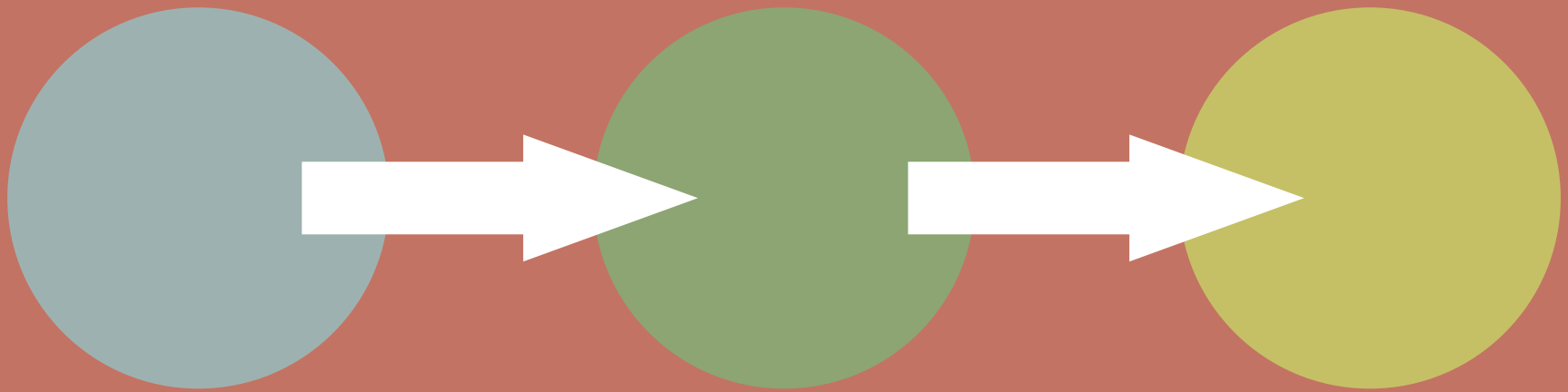
CHANGE IN QUALITY

CHANGE IN QUANITITY

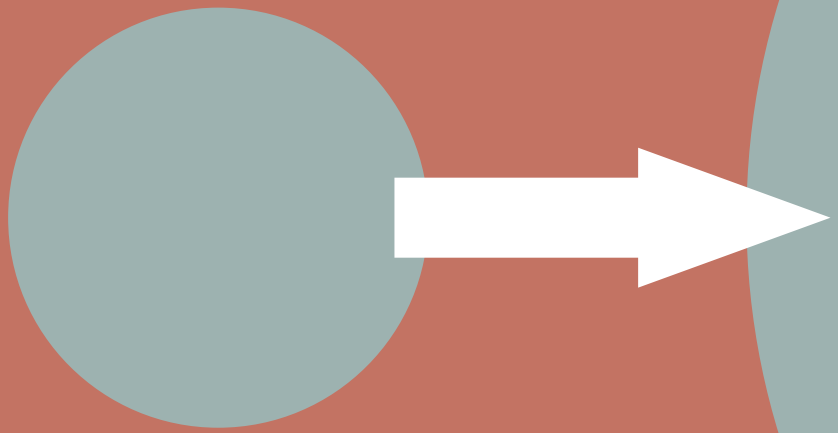
and

CHANGE IN SUBSTANCE

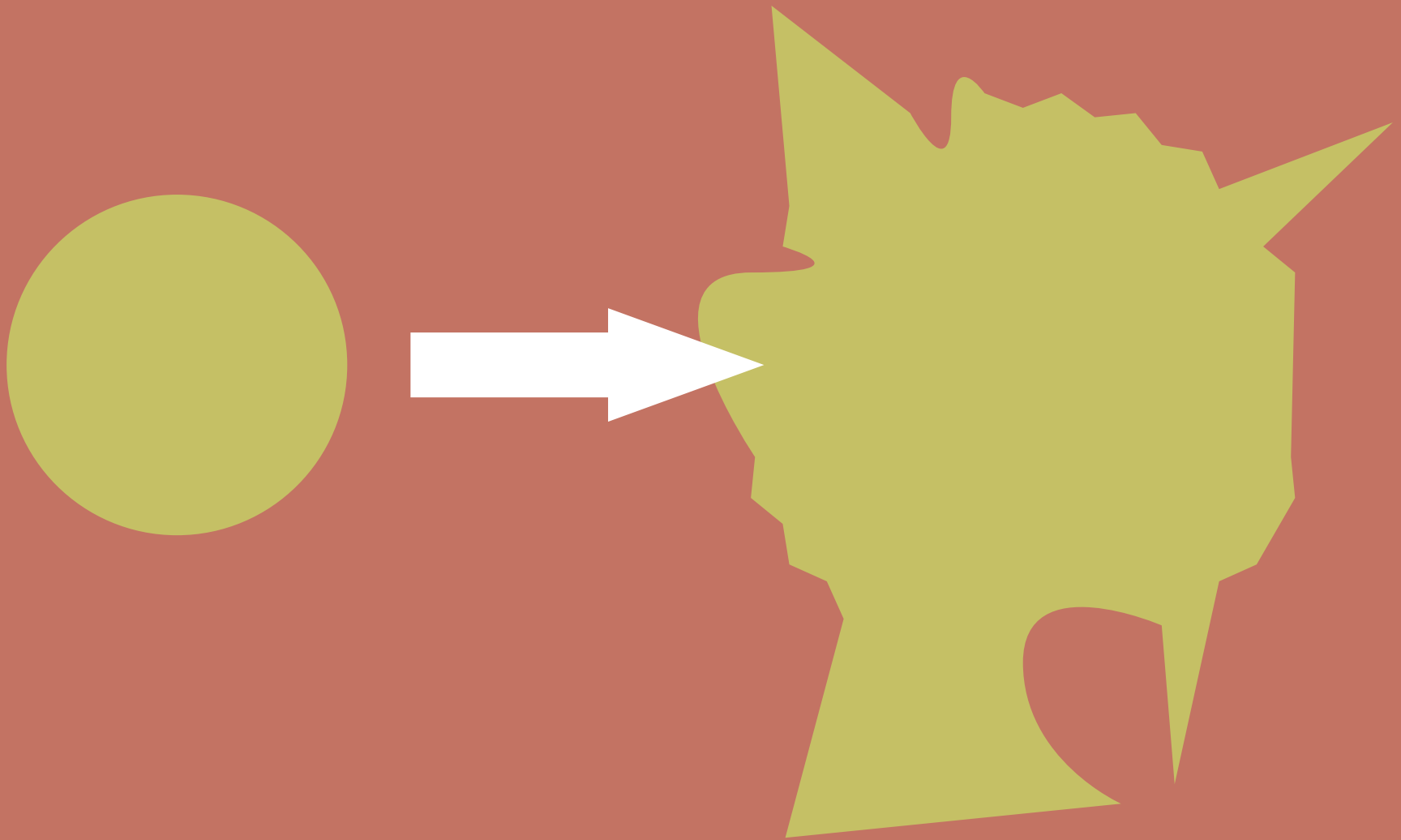
CHANGE IN COLOR



CHANGE IN SCALE



CHANGE IN SHAPE

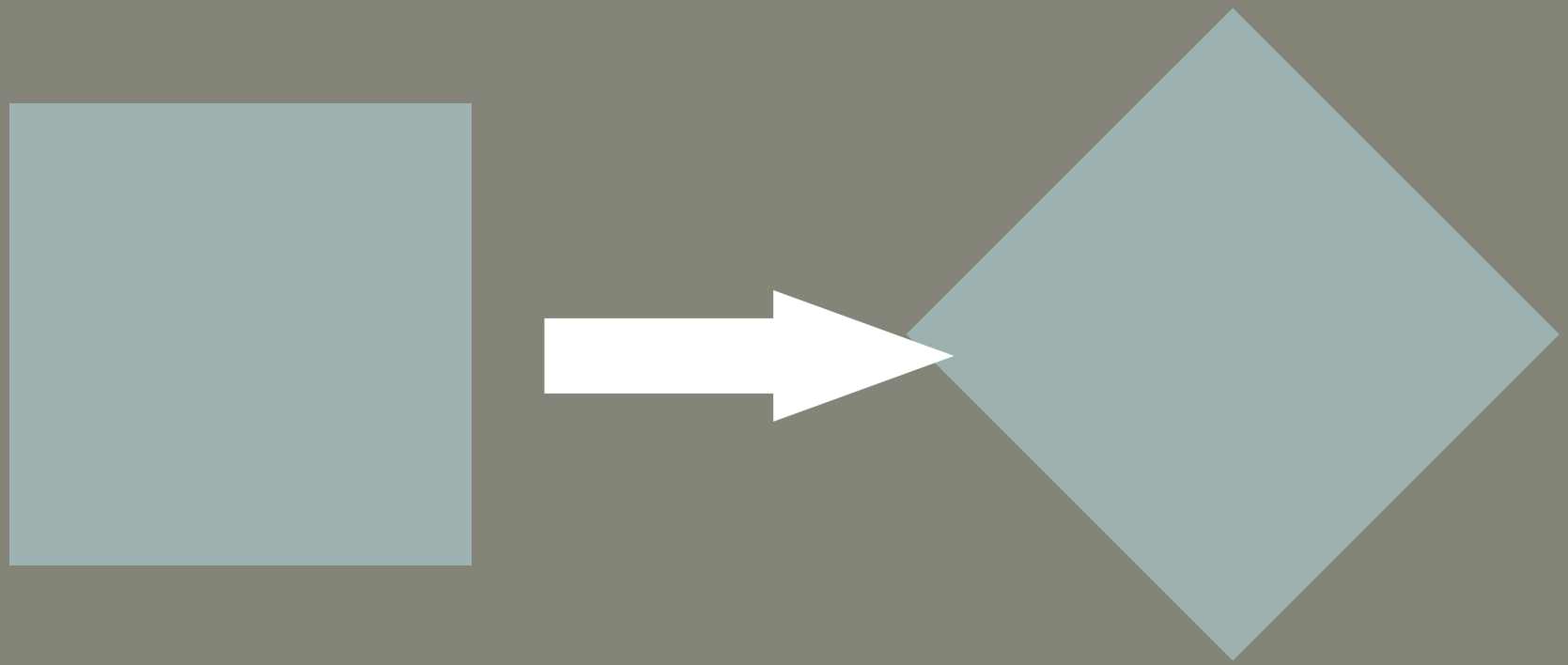


and, we can actually do
a few more than that

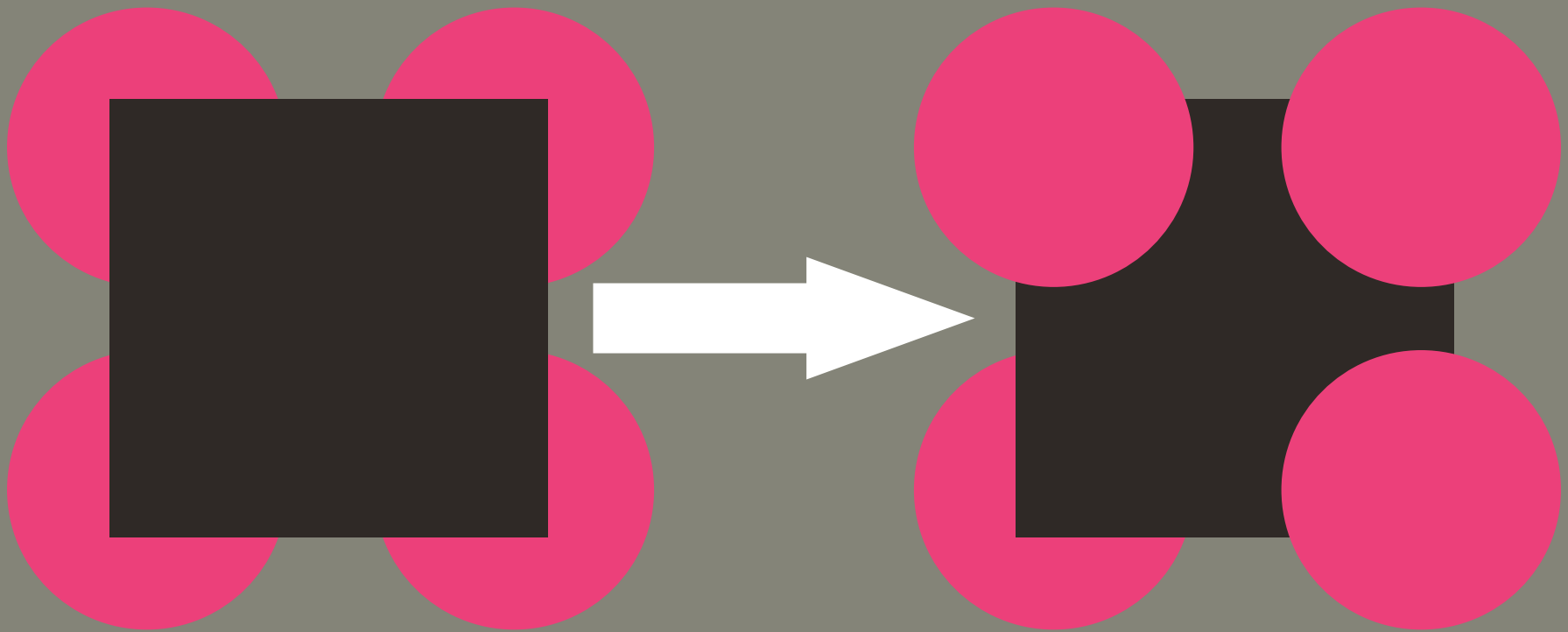
...

LIKE:

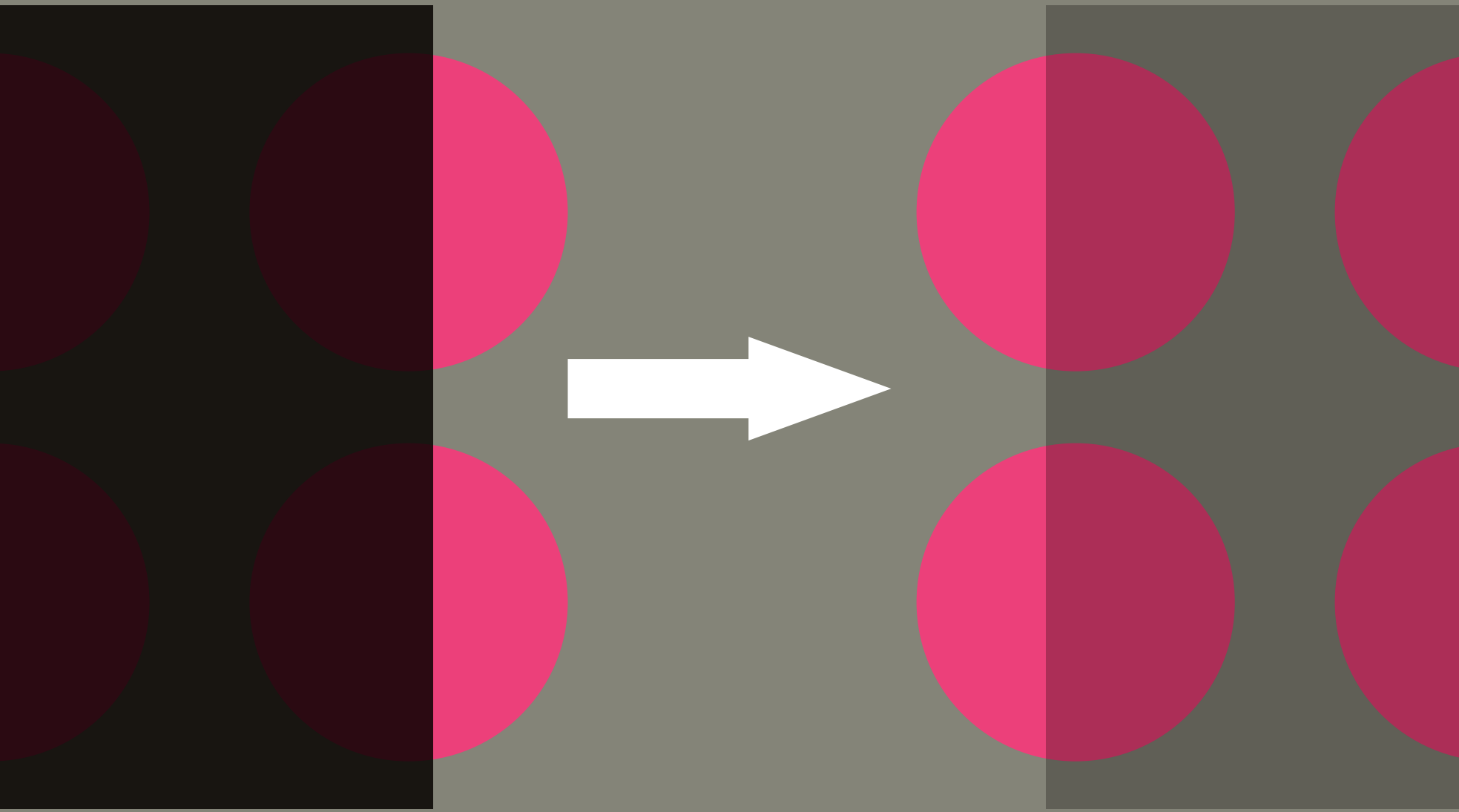
CHANGE IN ROTATION



CHANGE IN DEPTH



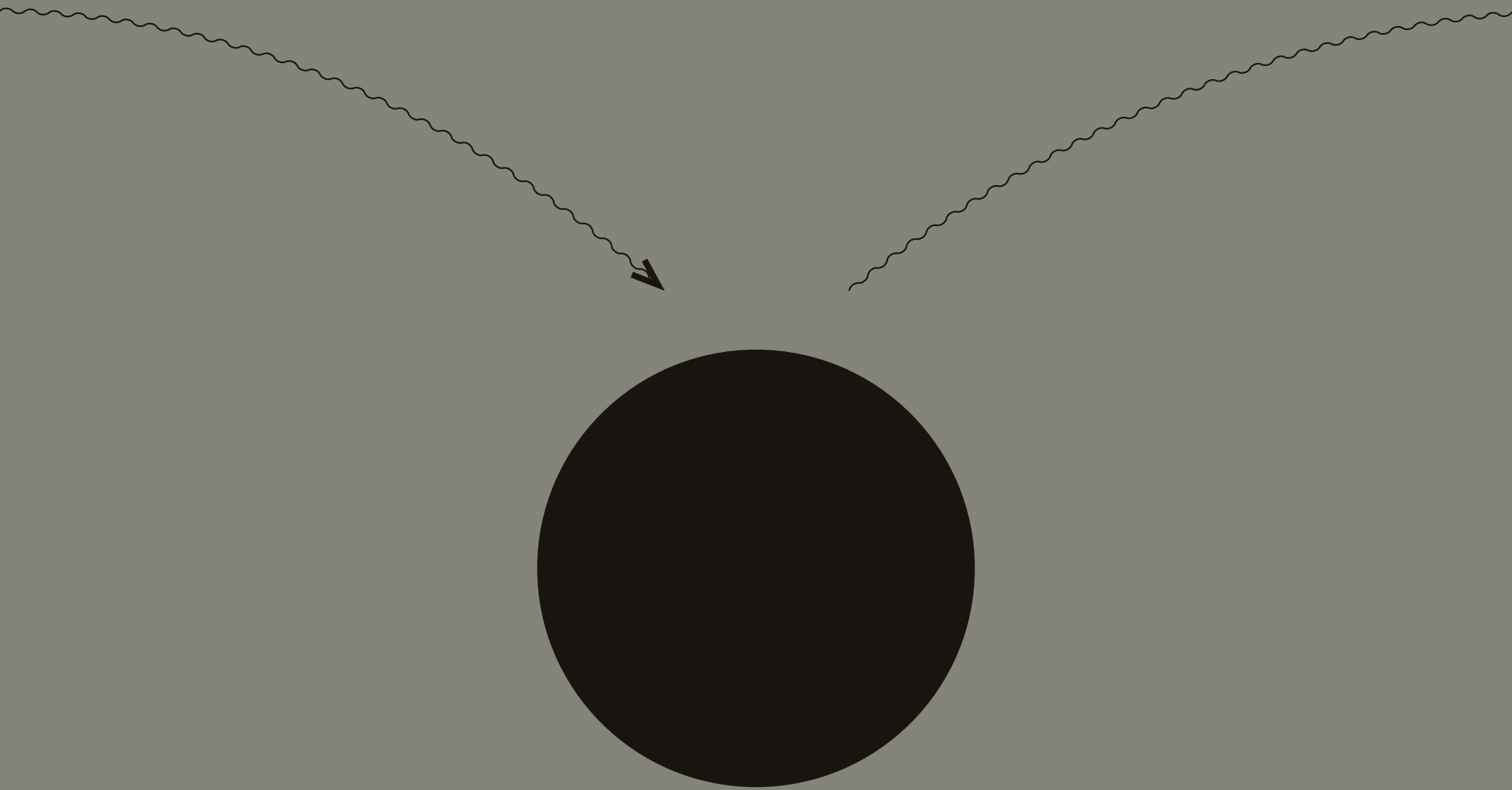
CHANGE IN TRANSPARENCY



Basic forms of Motion …

1. **Change Position**
2. **Change Color**
3. **Change Scale**
4. **Change Shape**
5. **Change Rotation**
6. **Change Depth**
7. **Change Transparency**

Sounds a lot like general basic design principles ...



DESIGN-A-MATION!

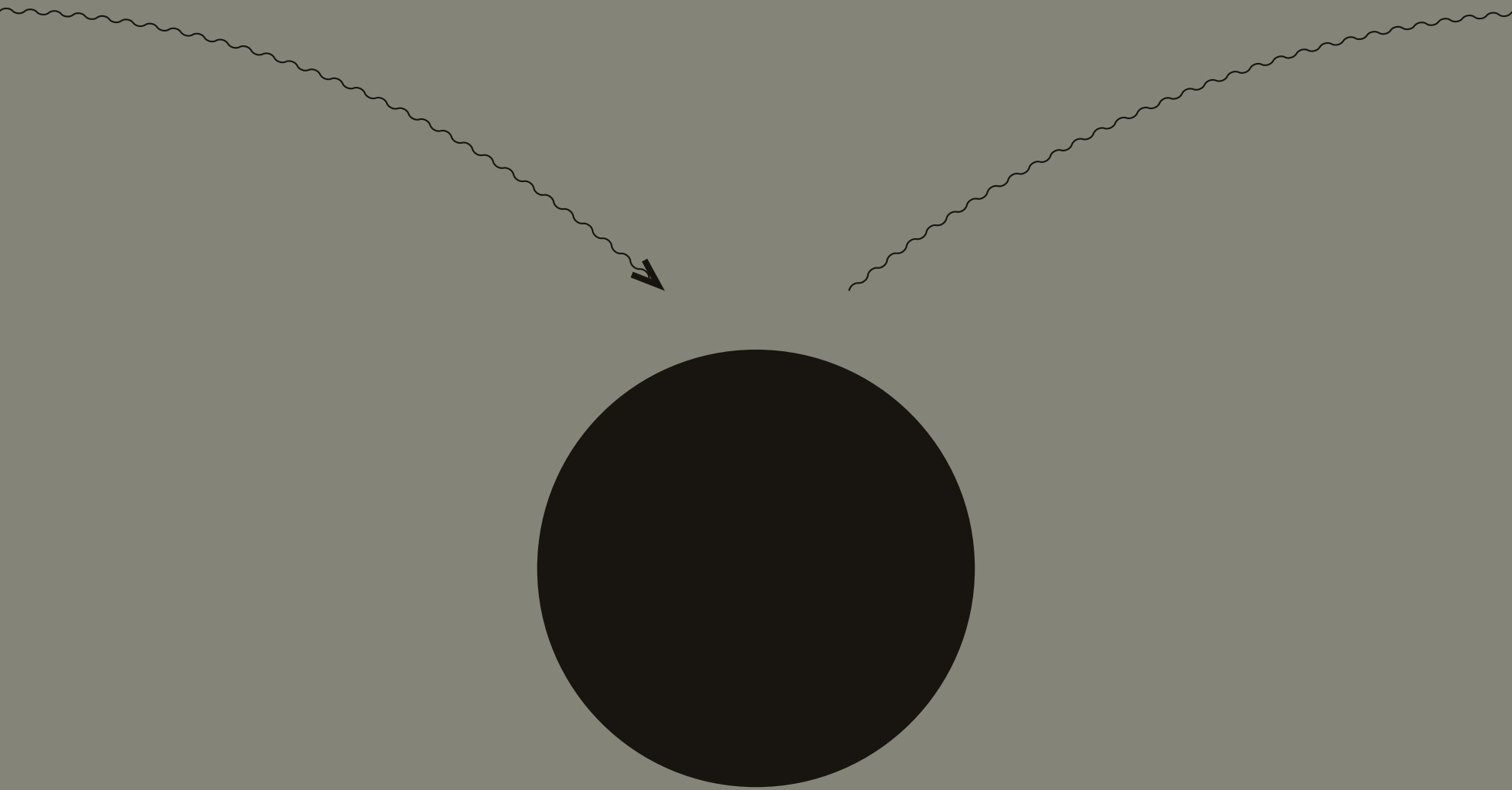
Make something

USING ALL 7

modes-of-change

please have something to export

BY THE END OF CLASS



GOODBYE!