

Magnets



Inspired by work of John Tzelepis

<http://www.johntzelepis.com/>

John Tzelepis

- 2000 - B.F.A., Skidmore College, N.Y.,
– (Studio Art / Art History)
- 2006 - M.F.A., Arizona State University, AZ
- “Energizing negative space and activating kinetic possibility, I experiment with potential and kinetic energy by creating “bridges” and towers comprised of parts that hover in space by magnetic and gravitational force.” (excerpt)

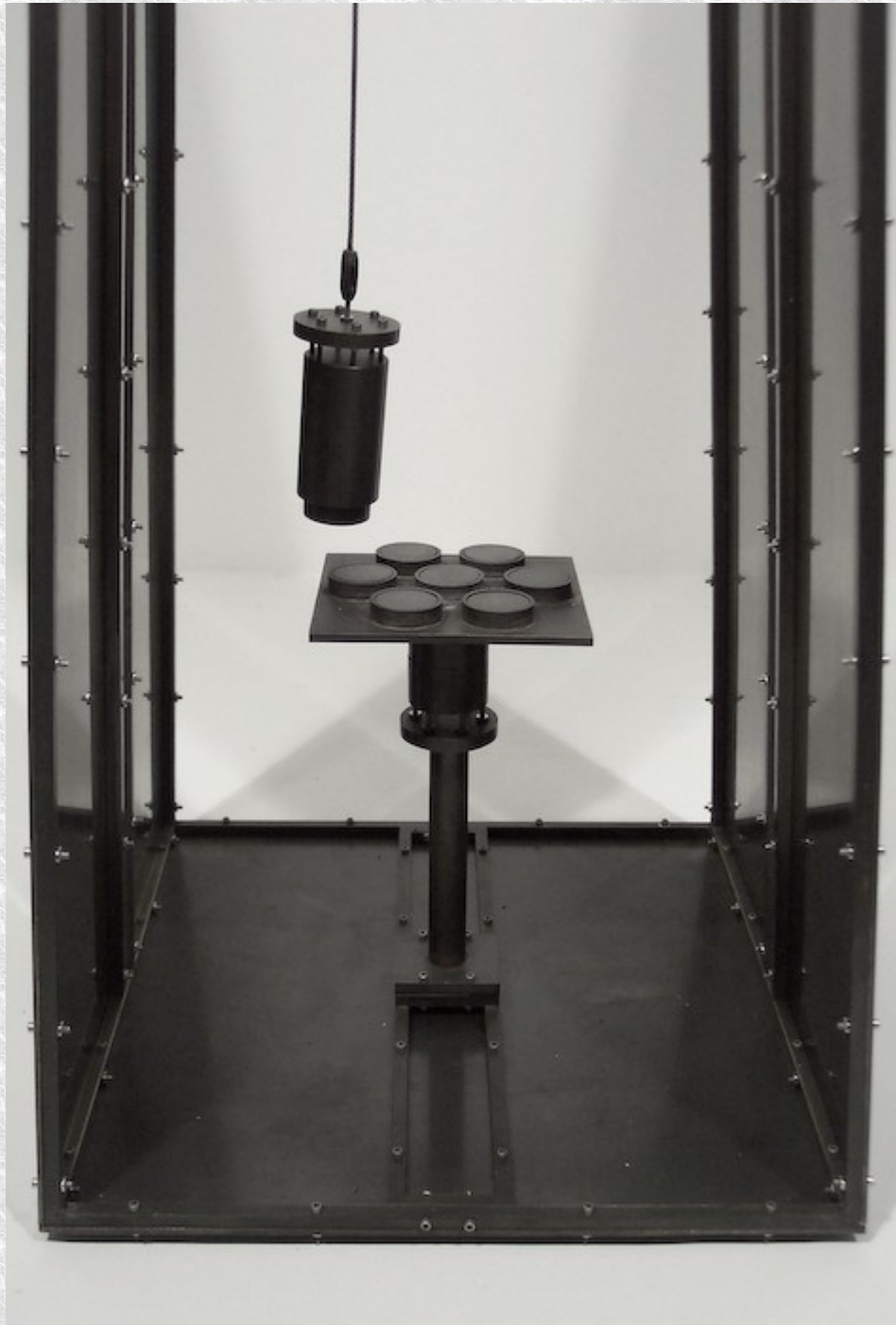
Magnet as a
“connector”



Magnet as a “connector”

- Two magnets set to attract maintain tension between two strings
- Interesting challenges:
 - Magnets snap if they are too close
 - Strings collapse if the magnets are too far away
- Visitors are baffled and intrigued





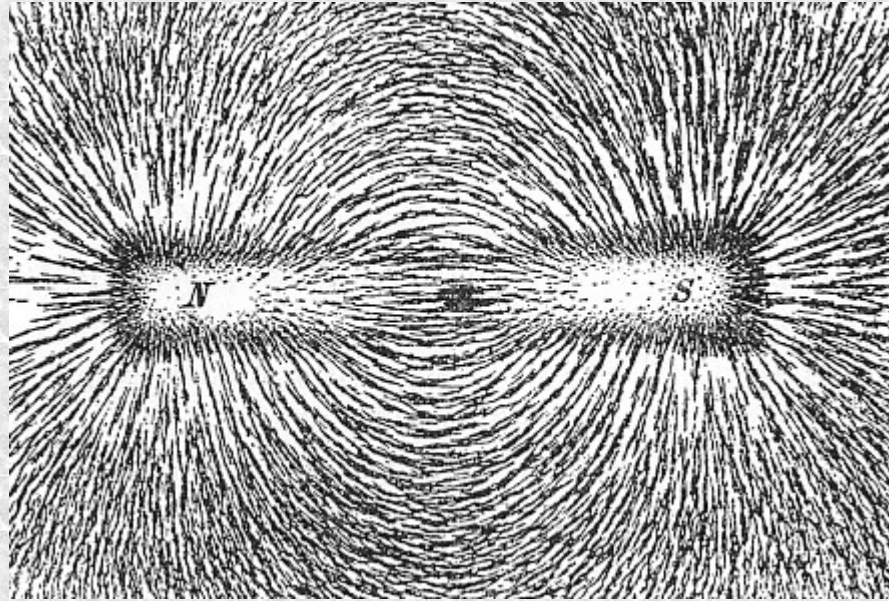
Magnet as a
guide

Magnet as a guide



- The magnets are set to repel the pendulum weight
- At low speeds, the pendulum weaves through the magnets

How does a magnet work



- Magnets (natural or electromagnetic) have two poles – opposite poles attract, same ones repel
- Certain materials are attracted to magnets (ferromagnetism and paramagnetism)
- Certain materials are repelled by magnets (diamagnetism)

Uses of magnetism

- Levitating frogs
 - <http://www.hfml.science.ru.nl/froglev.html>
- Coil guns (linear motor)
 - <http://en.wikipedia.org/wiki/Coilgun>
- Navigation (compass)
 - <http://en.wikipedia.org/wiki/Compass>
- And a lot of other things
 - Speakers, magnetic storage, credit cards, motors, refrigeration, sticking things onto refrigerators.

Electromagnetic Art / Projects

- Electromagnetic bodies

- <http://www.resonance-electromagneticbodies.net/rotterdam.html>

- Haunt

- (using electromagnetics to simulate a haunted environment)

- <http://www.haque.co.uk/haunt.php>

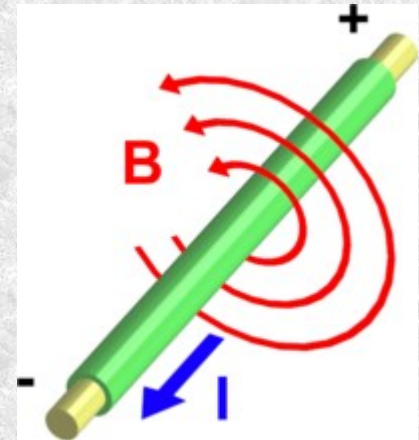
- Sky Ear

- (sensing electromagnetic fields in the sky)

- <http://www.haque.co.uk/skyear.php>

How to interact with magnets

- An electromagnet will modify its magnetic field based on current
 - Example: loudspeaker
- A changing magnetic field will induce current into a circuit
 - Example: induction cooker
 - (http://en.wikipedia.org/wiki/Induction_cooker)
- You can buy electromagnets and sensors online



Online resources

- Buying natural magnets

- <http://www.kjmagnetics.com/>

- Buying electromagnets and sensors

- http://www.sparkfun.com/commerce/advanced_search_result.php

- Things to do with magnets

- <http://www.coolmagnetman.com/magindex.htm>

- Magnet reference

- <http://en.wikipedia.org/wiki/Magnet>