

# How Things Really Are

Actually and Potentially

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# Introduction to Act and Potency

- I originally planned this talk to cover
  - Most of Aristotle's theory of causation and
  - Aquinas's perfection of that theory.
- But some things interfered.
  - I wanted to provide material on motivation.
  - I developed too much material.
  - I did not allocate enough time to the project.
- So talk is instead on
  - Fundamental metaphysical idea that led to modern science,
  - Historical development of that idea, and
  - Enemies of idea.

# Decay in the Heart of the West

- Western civilization is besieged today, but decay began long ago.
- Her philosophical foundation matured in 13<sup>th</sup> Century.
  - Aquinas completed program begun by classical Greeks.
- By 1600 too few students learned right principles.
- Decay began earnestly with Rene Descartes.
  - His mathematical innovations fueled technology.
  - His philosophical innovations were corruptions.
    - For example, denial of sense experience as real.

# The West and Her Enemies

- Western civilization, child of marriage between
  - Ancient Israel and
  - Classical Greece.
- She makes bold claims about
  - Dignity of man and
  - What is objectively real, as revealed by sense experience.
- Her enemies include
  - Those who might oppose any civilization and
  - Those who dispute her challenging claims.

# Origins of the West: Overview

- Hebrew and Greek intertwined in Septuagint.
  - Torah finished in 200s BC.
  - Rest finished around 130 BC.
- They became one in Christianity.
  - Church requires both traditions to express teaching.
- Combined tradition (mostly Christians)
  - Converted declining empire away from paganism,
  - Defended Europe against Muslim invasion, and
  - Established new civilization whose fruits include
    - Modern science and
    - Legal protection of rights of man.

# Origins of the West: Ancient Israel

- Common pagan religion in ancient Near East
  - Origin myth concerns transformation of preexisting gods or things.
- Ancient Israelites and Genesis 1
  - Things have not always existed.
  - God, Who is not thing, initially created things.
  - Things did not always exist.
  - There was beginning when first things were created from nothing (ex nihilo).

# Origins of the West: Greece

- Being and becoming
  - Ancient philosophers struggled to understand apparent simultaneity of permanence and change.
    - Some denied that change is real.
    - Some denied that permanence is real.
  - On each side, reality of sense experience was denied.
- Culmination in Aristotle
  - Aristotle stood up for reality of sense experience.
    - In any change, what had already existed as potentiality becomes actual.
      - What remains actual has some permanence.
      - What becomes actual accounts for change.
    - No need to deny reality of sense experience.
  - This metaphysical basis led to modern science, which takes sense experience as fundamental data in need of theoretical explanation.

# Origins of the West: Christianity

- Before Aquinas, Christianity united Jerusalem and Athens.
- Aristotle's work
  - Not incorporated into Western tradition before fall of Roman empire
  - Lost to West after fall of empire
  - Never incorporated into Eastern Christianity
  - Rejected by Islam just before crusades
- Aquinas completed Aristotle's metaphysics
  - Crusades made Aristotle available to Aquinas.
  - Aquinas used theory of act and potency not just to explain change but to show how creation ex nihilo takes place at every moment in time.
  - Complete synthesis of Hebrew and Greek tradition set stage for modern science.



# A Recent Enemy

- West has had enemies within her ranks since Descartes.
- Recent enemy is atheistic materialism in form of *scientism*.
  - Scientism: Everything that exists is describable by modern science.
  - Many a “science advocate” promotes scientism, not science.
  - Ignorant dismissal of metaphysics is central to scientism.
  - Ironically, scientistic denial of Aristotle undercuts philosophical basis of modern science.

# Actual and Potential: Eleatics

- Parmenides and Zeno (yes, that Zeno) appeared to deny reality of change.
  - In change, something new arises; what is new did not exist before change.
  - Denying that new existence can come from non-existence, Eleatics denied reality of change reported by senses.
- Debate continues today.
  - Physicists commonly think that time is real, but *passage* of time is illusion.
  - Passage of time is like what Eleatics called “change”.

# Actual and Potential: Heraclitus

- Heraclitus seems to have held
  - That everything is in flux and
  - That nothing is permanent.
- This is opposite of Eleatic view.
- Still, senses show some permanence in things, and so senses need be regarded as untrustworthy.

# Actual and Potential: Example

- In thing that is now real in one way, there are things that are now real in another way.
- Suppose that sphere of silly putty is now real in actuality.
  - In sphere, flat blob of same mass is now real in potentiality.
  - Also in sphere, cubic blob of same mass is now real in potentiality.
  - In sphere, zebra is not real in potentiality.
- One task of modern science is to find out what real potentialities exist in natural substance.

# Actual and Potential: Change

- Change occurs whenever potentiality in actual thing becomes actual.
- Potentiality can be actualized only by something else already actual.
- In order for sphere of silly putty to be squashed flat, something actual (like hands squeezing sphere) must be present.

# Higher Priority of the Actual

- Potentiality is always *for* some kind of actuality.
- Potentialities in thing depend on what thing is.
- Potentiality in one thing is actualized only by another thing already actual.
- Potentiality cannot exist on its own, apart from something actual.
  - Potentiality is found only in combination with actuality.
- Actuality, too, is found only in combination with potentiality, except in God, Who is pure actuality.

# Causal Powers and Laws of Nature

- If Thing 1 can actualize potentiality in Thing 2, then Thing 1 has *causal power*.
- Every actual thing has
  - Causal powers to act on other things and
  - Inherent potentialities that can be actualized by other things.
- This gives rise to patterns of activity in natural world.
- So-called “law of nature” is not what makes things behave as they do.
  - Rather, it is what we propose to summarize interactions of things according to their natures.

# Causes, Essence, and Existence

- By analyzing distinction between actuality and potentiality, Aristotle derived four notions of causality.
  - These will be explored in later talk.
  - Two causes (one actual, one potential) are intrinsic to every being.
  - Two causes (one actual, one potential) are extrinsic to every being.
- Aquinas, building on Aristotle, distinguished between essence of thing and its existence.
  - Essence is potentiality for existence, which is actual.
  - This allows synthesis of fullness of Greek philosophy with Hebrew idea of creation.
  - Creation ex nihilo is God's union of essence with act of existence.



# Summary

- Aristotle's metaphysics was introduced to allow confidence in sense experience by accounting for both change and permanence.
  - This represents culmination of classical Greek philosophy.
- Aquinas perfected Aristotle's metaphysics and synthesis of Hebrew and Greek thought.
  - This represents heart of Western civilization.
- Confidence in sense experience led
  - to investigation of miraculous claims,
  - to scientific exploration of potentialities inherent in things, and thus
  - to modern science.
- Ironically, in name of modern science, recent enemies of West deny philosophical basis of modern science.