

# The Motor Cause and the Modern Mind

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Grant me the grace, O merciful God, to desire ardently all that is pleasing to Thee, to examine it prudently, to acknowledge it truthfully, and to accomplish it perfectly, for the praise and glory of Thy name. Amen.

Prayer of St. Thomas which he was accustomed to recite everyday before the image of Jesus Christ.



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## A Science Must be Causal

- No extrinsic causes  $\Rightarrow$  world would be indeterminate.
- Lecture outline:
  - Hume's conception of causality
    - How his conception applies to empiriological physics
    - Causality according to Kant, Hume's disciple
  - Motor cause not absolutely intrinsic, equal, or extrinsic to effect.
  - Causality according to Hegel, Marx, and emergent evolutionism

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## Hume Viewed Causality as Succession

- Hume rejected motor causality and concluded that causality is a temporal succession.
  - A cause does not influence the effect; it simply precedes it in time.
- As a Cartesian, he denied substances.
- He thought knowledge does not go beyond sensations; this is empiricism.
- Example: According to Hume, does an alarm clock cause a sleeping man to awake?

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## Hume Contradicts Reason

- Hume: Causality is purely a psychological association of otherwise unrelated events.
- Is every succession causal?
  - Reid's refutation of Hume: "Night and day follow one another, but does night cause day and *vice versa*?"
- Hume's causality reduces to a *functional relationship*:
  - For the function  $y = f(x)$ , does  $x$  cause  $y$ ?
  - Are only functional relationships needed in science?
    - If so, Russel would be right: "The barometer has ceased to have any effect upon the weather."
      - Since the barometric fluctuations forecast and thus precede the weather.

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## Empiriological Physics Finds a Place for Hume

- Pure empiriological physics ignores causes.
- Is causality measurable?
- Causality reduces to *prediction in time*.
  - This is adequate for the "merely descriptive enterprise" of empiriological physics.
- True causality:
  - Cause and effect distinct,
  - yet not not disconnected, as in Hume's conception.

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## Kant Made Causality an Apriorism

- *Apriorism* = “employment of *a priori* reasoning”
  - *A priori* = “Prior to experience; innate in the mind.” (OED).
- Kant agreed with Hume that:
  - $\nexists$  motor causes.
  - Causality is an association of mental states.
- Kant disagreed with Hume that
  - Causality/association results from a mental habit.
- Kant’s: Causality is *a priori*, innate in the mind.

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## Kant Made Causality an Apriorism

- Kant basically said “that ontological realities are simply anthropomorphisms” which we project onto reality.
  - This began the mutual alienation of philosophical and empiriological physics.
- Quantum and relativity theories challenge Hume’s and Kant’s dogma:
  - Uncertainty principle  $\Rightarrow$  universe not ordered.
  - Relativity theory denies absolute space and time.
    - This suggests possibility of “temporal reversibility.”

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## A Cause is not Absolutely Extrinsic

- A cause influences an effect; there is an “influx” from the cause into effect.
- Humean self-motion impossible
  - Self-motion  $\Rightarrow$  indeterminism.
- Thus there must be outside motor causes.
  - “Motion implies a type of inner penetration by the motor into its subject.”
    - $\nRightarrow$  “motion involves physical compenetration”.
- Motors are not strictly extrinsic. (Leibniz disagrees.)
- Aquinas: “Mover and mobile are together.” (*Motus et movens sunt simul.*)

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## A Cause is not Absolutely Intrinsic

- “Does the motor contribute something of its own being to the effect”?
- Descartes: Locomotion sole kind of movement, a “physical transfer of parts”
- Is radium’s emission of an  $\alpha$ -particle the cause or effect of its radioactivity?
  - Empiriological physics call this “spontaneous”
    - Viz., in empiriological physics, cause and effect equated

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## Causes Move by Contact

- “Moved and mover are together but not the same, different but not distant.”
- Analogies to understand the relationship between mover and moved:
  - Knowledge: the “becoming of other as other”
  - Neoplatonic idea of emanation: motor causality, while not destroying itself, conferring a form on the moved
    - Example: Poet leaving something of himself in his poem
      - A poet is not his poem, as a Cartesian would say!

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## Empiriological Physics Equates Cause and Effect

- Action: “a doing something *to* another”
  - *Agents* have *action*.
- Passion: “a receiving something *from* another”
  - *Patients* have *passion*.
- Suarez “held that action is formally in the patient”.
  - But this reduces to a denial of the extrinsic character of motor causes  $\Rightarrow$  mobile universe of self-motion.

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## Empiriological Physics Equates Cause and Effect

- A parallelism:
  - (action : passion) :: [action : reaction]
    - Words in () are terms with traditional meaning, and words in [] are terms with empiriological physics meaning.
- This parallelism is not perfect  $\therefore$  reactions rebound onto their actions in empiriological physics;  $\therefore$ , reactions become actions, too.
- Empiriological physics: action = passion, passion = action.
  - Law of Equivalence

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## Empiriological Physics Equates Cause and Effect

- Ernst Mach: "A body that presses or pulls another body is, according to Newton, pressed or pulled in exactly the same degree by that other body. Pressure and counter-pressure, force and counter-force, are always equal to each other" (*Science of Mechanics*, p. 199).
  - Law of Equivalence  $\Rightarrow$  Conservation of Momentum
- Newton's 3<sup>rd</sup> Law supports his 1<sup>st</sup> Law (Law of Inertia).
  - Reality completely determined from the outside
  - Cause = effect.

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## The Cause-Effect Equation Fails to Explain Novelty

- If cause = effect, how can there be motion?
- "Suppose a horse were attempting to pull a wagon up a hill (action [or mover]) but that the opposing forces (reaction) were just sufficient to balance out the pull on the horse. The wagon and the horse would never move."
  - Empiriological physics explains this by saying:
    - Reaction = motion, mover = moved;
    - $\therefore$ , reaction = mover, so there is no cause or effect at all!
      - But surely the horse is doing something!

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## The Cause-Effect Equation Fails to Explain Novelty

- If cause = effect, how can there be novelty in the universe?
- Motion breeds novelty.
- Aquinas: "every new reality needs an innovating principle."
- Example: "[I]f each man gave back to the world only what he got out of it, there would be no progress in" human endeavors.
- Nature is more "than a mere mathematical balance."

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## Entropy Fails to Explain Causation

- Empiriological physics tries to explain motion as being a result of entropy.
  - Recall: Entropy is a measure of disorder, or, equivalently, the measure of the amount of usable energy.
- But how does entropy explain novelty?
- Is entropy reducible to the law of action and reaction?
  - But how does that explain novelty?

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## Nature is an Innovating Principle

- "Nature is an intrinsic source and principle in things."
  - $\therefore$ , Nature  $\neq$  inertial forces acting from without.
- Movement results from the originality in nature, not from equality.
  - Its motions have their origin in the Prime Mover.
- To summarize: There must be a difference between:
  - Mover and moved
  - Action and passion (in wide sense)
  - Action and reaction
  - Cause and effect

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## Action is Different from Passion

- Action and passion “involve a difference in directionality within a movement.”
- Action initiates; passion receives.
- If action = reaction (passion), then every nature would be able to move itself.
  - But every nature is certainly not alive!
- Man can be both “agent and patient of his own actions”.
- Efficient causes are always greater than their effects.

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## Hegel Does not Lead to True Hierarchy

- Hegel: Universe is pure becoming.
  - Hegel a neo-Heraclitian
- Hegelianism emphasizes *process*.
- He explained dynamism with dialectical triad:
  - “Whatever exists (thesis) calls its opposite into being (antithesis).”
  - Thesis + Antithesis → Synthesis.
  - Slave (thesis) + Slave Owner (antithesis) → somebody surpassing them both (synthesis)
- He thus equates being and non-being.

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## Marxian Dynamism Impossible

- Marx and Engels followers of Hegel
  - However, they wanted to explain motion without the need for an extrinsic Prime Mover.
  - “Hegel insisted on the Absolute”, yet he was a pantheist.
- “Matter according to Communism is self-moved and hence self-explanatory.”
  - Lenin: “A is A” is an “intolerable vacuity.”
- Something cannot contain its contraries.

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## Emergent Evolution Denies Cause-Effect Equality

- Emergent evolutionism rejects mechanism of matter and upholds its spontaneous character.
  - Emergent evolutionists: Santayana, Alexander, Whitehead, Bergson, Lloyd Morgan, MacDougall, Smuts, and Sellars
  - They “vitalize” matter, so matter moves itself
    - This is counter to the “orthodox empiriological method,”
    - But “ultraempiriological” in “forcing” “the Cartesian and Humean” premises “to wring” vitalism out of matter.
- Naturalism also adopts emergent evolutionism.

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## Dualism Harmonizes Modern Oppositions

- Two extremes on a spectrum:
  - Strict empiricism
    - Adopted by philosophers biased toward the empiriological method
    - They are right that causes determine effects
    - They are wrong that cause = effect.
  - Emergent evolutionism
    - Is correct in accenting the “spontaneity of nature” and “inequalities in motion”
    - Is incorrect in making cause and effect unrelated.
- Solution: matter and form united by an efficient cause; this is hylemorphism (matter-form dualism).

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## References

- V. E. Smith's *Philosophical Physics*
  - Please finish reading ch. 7 (The Motor Cause and the Modern Mind).
    - I will post PDF of the reading on the reginacoeli.box.com page.
- Suggested Readings
  - De Finance, Joseph, *Être et agir* (Paris, 1945)
  - Garrigou-Lagrange, Reginald, *God, His Existence and Nature*, transl. B. Rose (London, 1934), Vol. I.

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