



ORU

MAKE NO LITTLE PLANS HERE

Creation as Invitation:

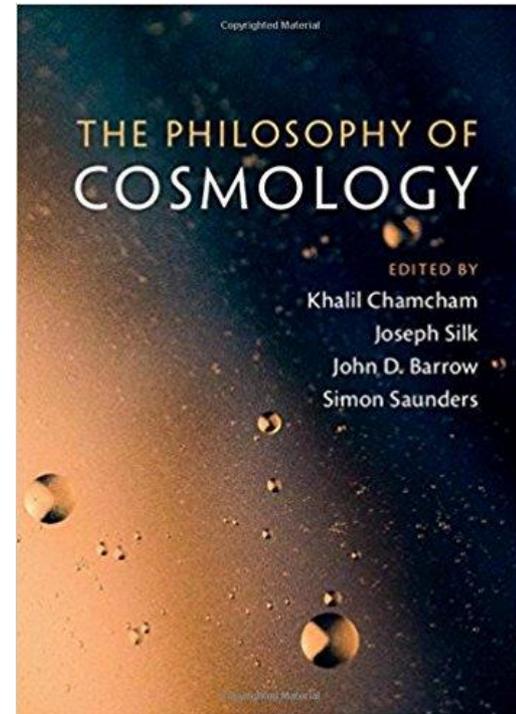
How Nature Conspires with Scripture in Calling Us Back to Our Maker

Dominic M. Halsmer, PhD, PE, Jeffrey S. Lamp, PhD and Philip A. Riegert, at ASA Annual Meeting, CSM, 7/30/17

- 1. Big Picture → Big Questions – Philosophical/Religious Cosmology**
- 2. Universe → Affordances that Invite**
- 3. Affordances: Ecological Psychology**
- 4. Affordances: Engineering**
- 5. “Judgements” of Nature (i.e. Plagues) Afford Direction as “Signifiers”**
- 6. How Nature Works with Scripture in Calling us back into Relationship**

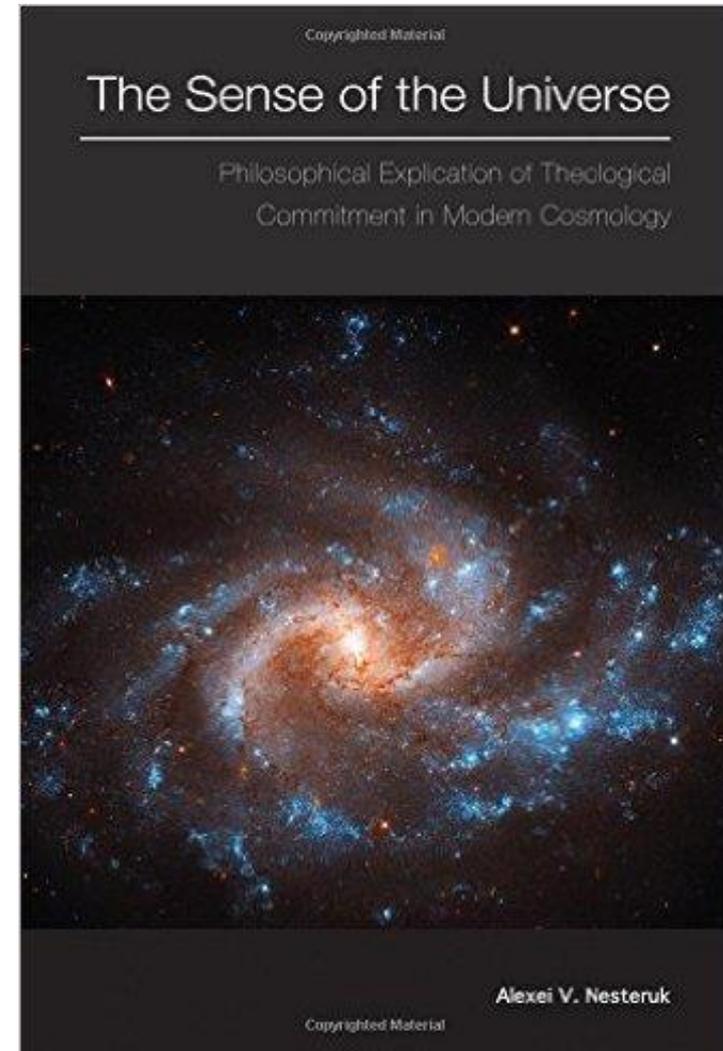
Tries to respond to questions like...

1. What is the origin and meaning of the cosmos?
2. How does the cosmos behave?
3. What are its essential constituents?
4. Does the cosmos have an **ulterior motive**?
5. How can we understand the cosmos in which we find ourselves?



**“Thinking of
the universe
leads one to
thinking of
God.” (p. 18)**

**- Alexei
Nesteruk**

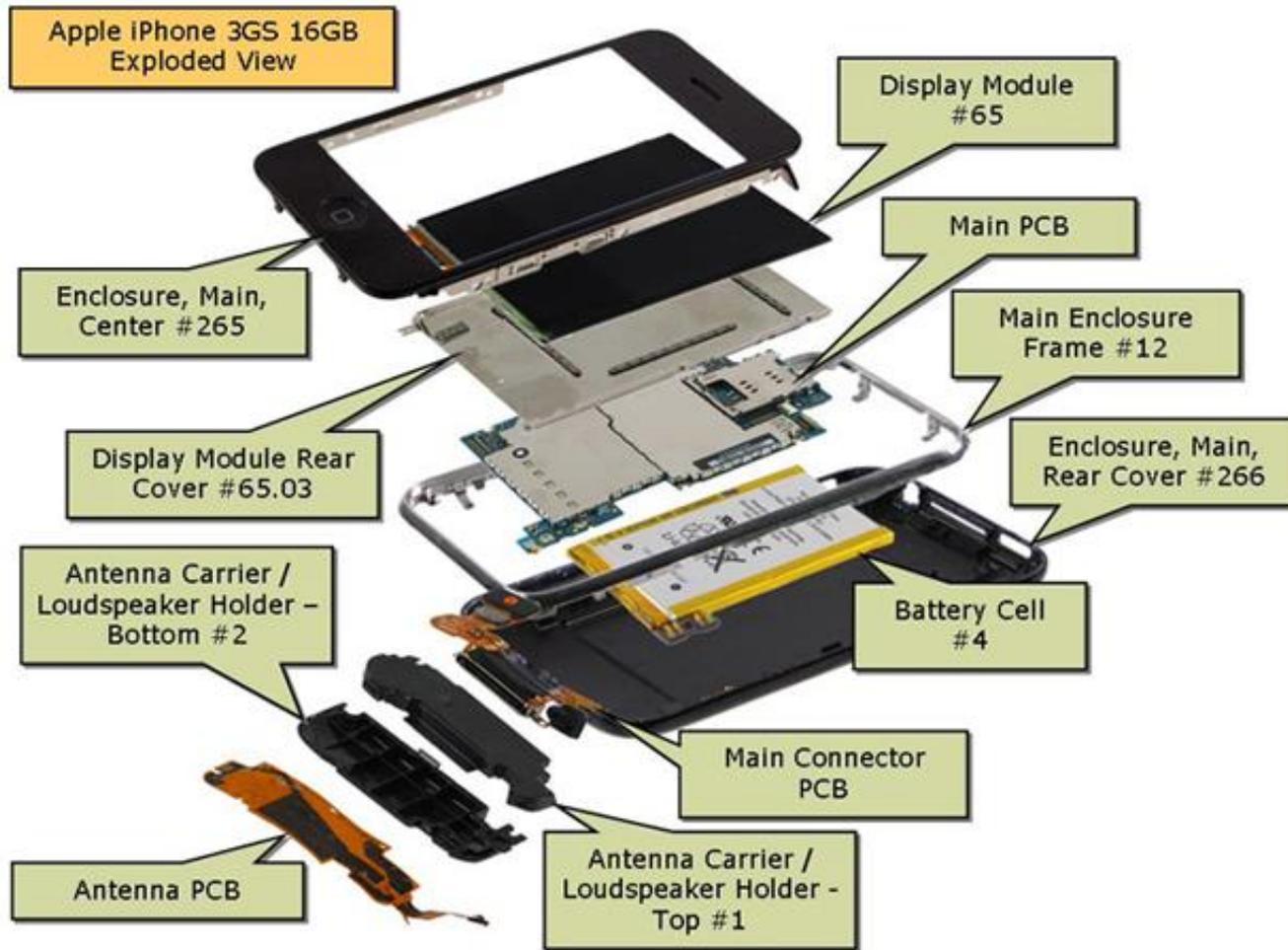


A system of inter-dependent, nested affordances that lead to, and sustain, complex life

Affordance: A relationship that offers a potential interaction (+ or -)



Affordances: Relationships that result in capabilities



Sub-atomic Particles

→ Atoms

→ Molecules

→ Biomolecules

→ Amino Acids

→ Proteins, DNA, etc

→ Organelles, structures, etc

→ Cells

→ Tissues

→ Organs

→ Human body

“The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or for ill.”

- James Gibson, *The Ecological Approach to Visual Perception*, (1986), 127.

“Affordances are possibilities for action the environment offers to a form of life, and an **ecological niche is a network of interrelated affordances available in a particular form of life on the basis of the abilities manifested in its practices...**

Affordances are relations between aspects of a material environment and abilities available in a form of life.”

- Rietveld & Kiverstein, “A Rich Landscape of Affordances,” *Ecological Psychology*, 24:6 (2014), 330, 335.

Niche – The function or purpose of a species within an ecological community, including the environment to which it has become adapted, as well as its role as producer & consumer of food resources.

“the concept of affordance might also help to clarify the process of **niche construction**...what this process actually consists in at a behavioral level is the perception, utilization, destruction and creation of affordances...

...Indeed, in constructing a niche, animals perceive and utilize affordances and by so doing **create and destroy other action possibilities.**

Hence, an affordance-analysis cannot only help in clarifying how the niche is constructed, it also helps in understanding what the modification of a niche consists in.

Indeed, animals bring about **changes in the affordance layout** and this modified layout is passed on to the offspring.”

- Withagen & Wermeskerken, “The Role of Affordances in the Evolutionary Process Reconsidered,” *Theory and Psychology*, 20:4 (2010), 505.

“Affordances are not mere action possibilities but that they can also **invite behavior**.” Also, they can be **normative**.

“Strength” of invitation depends on:

1. Capabilities of the agent
2. Importance for survival/thriving
3. Cultural conditioning
4. Personal history and experience.

R. Withagen, H. de Poel, D. Araujo, and G. Pepping, “Affordances Can Invite Behavior: Reconsidering the Relationship between Affordances and Agency,” *New Ideas in Psychology*, 20 (2012), 250-258.

“**Agency** is...the capacity to modulate the coupling strength with the environment...

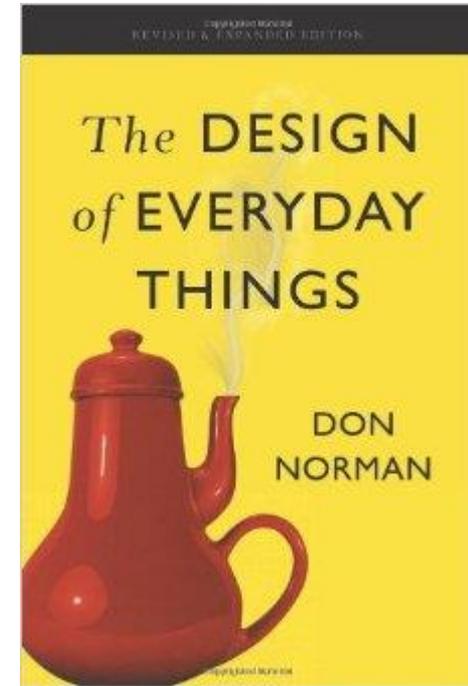
The agent can **influence** to what extent he or she is influenced by the different invitations [that affordances elicit]...

By **modulating the coupling strength**, the agent simply alters the dynamics of the animal-environment interactions and thus the behavior that emerges.”

R. Withagen, D. Araujo, and H. de Poel, “Inviting Affordances and Agency,” *New Ideas in Psychology*, 45 (2017), 11.

“An affordance is a relationship between the properties of an object and the capabilities of the agent that determine just how the object could possibly be used... affordances provide strong **clues to the operation of things.”**

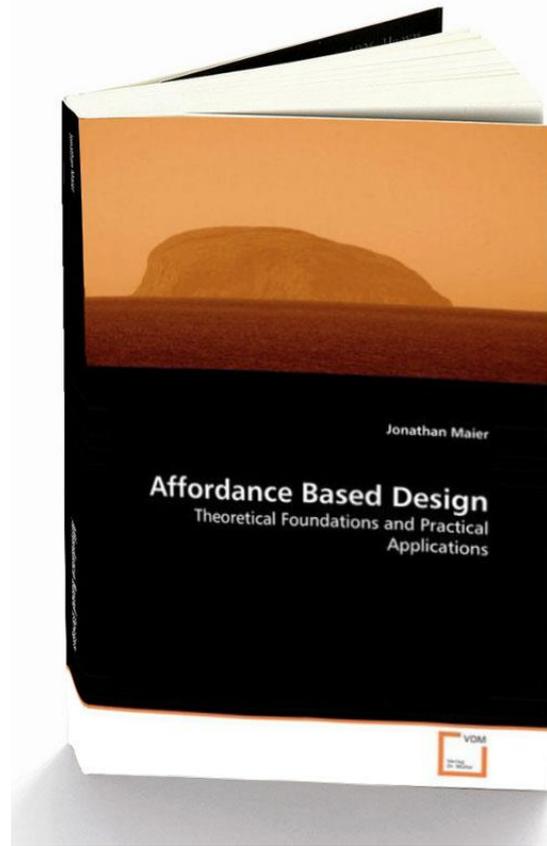
Don Norman, *The Design of Everyday Things, revised and expanded edition* (New York, Basic Books, 2013), 11, 13.



“Good design requires...good communication of the purpose, structure, and operation of the device to the people who use it. That is the role of the **signifier**.”

For Norman, the term signifier refers to any perceivable indicator that communicates appropriate (**normative**) behavior to a person.

Norman, *Design of Everyday Things*, 14.



<http://www.the-design-works.com/>

Maier
Design
Works

J. Maier proposes the concept of **affordance** (what a system provides to an end-user, or what one part of the system provides to another part)... as an underlying and unifying principle in the science of product design, & **reverse engineering**.

“**Sequential affordances** explain how affordances can be revealed over time; **nested affordances** describe affordances that are grouped in space...

The role of a good **interface** [between engineered system and user] is to guide attention via well-designed groups of sequential and nested affordances.”

Gaver, “Technology Affordances,” Proceedings of the SIGCHI conference on human factors in computing systems; ACM, (1991), 82.

**Dr. William
Gaver**

These interdependent affordances not only reflect good design, but also provide important clues for **reverse engineering**.

“The characteristic reflexivity of human cognition means that we are not only able to perceive the world **as it is**,...

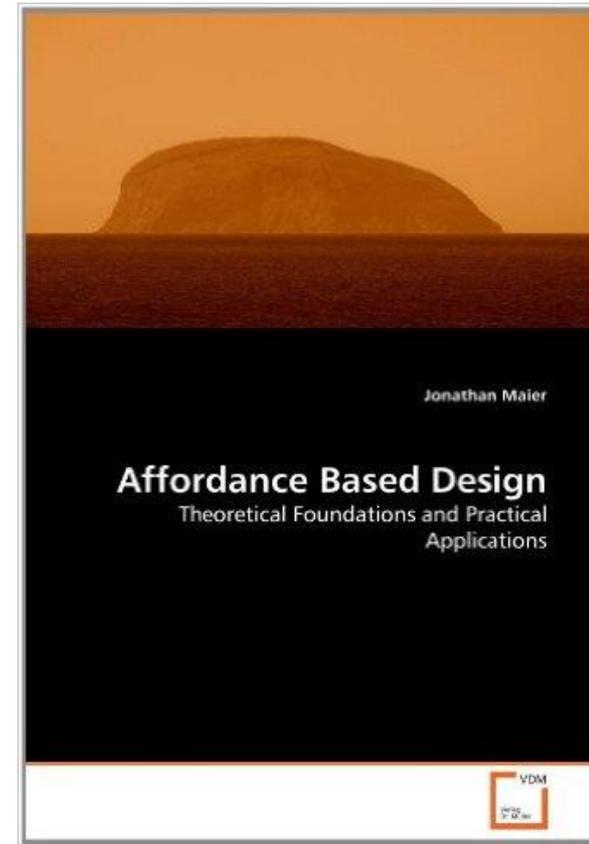
but also to perceive affordances that do not yet exist, that is, to perceive the world **as if it were otherwise**...

and hence we may take meaningful, **intentional action** to bring it about if we so choose.”

He adds that, “nature is a harmonious sign system,” and that affordances are signs of meaning and **purpose**.

Affordance-based design is a “relational theory for design since it helps to “explain the **entanglement** between designers, users, and [engineered] artifacts.”

He also proposes “an affordance-based method for reverse engineering and **redesign.**”



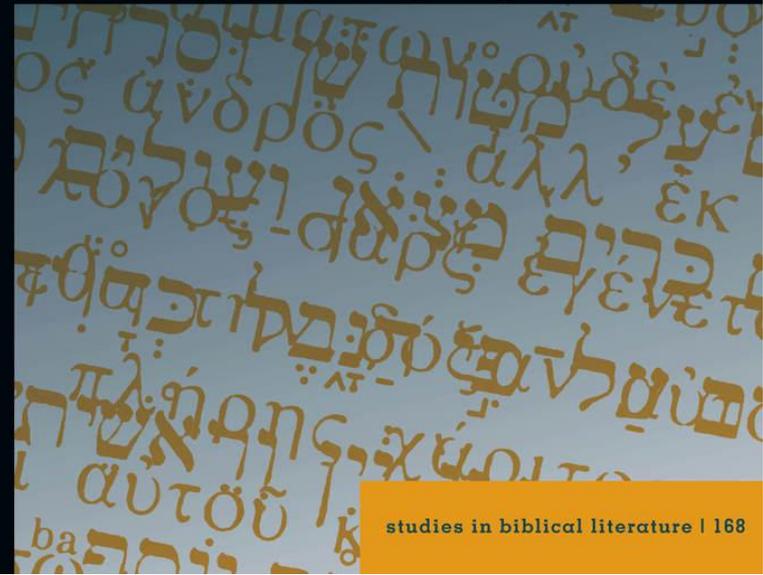
Affordance-based Analysis of the Plague Narrative in Exodus



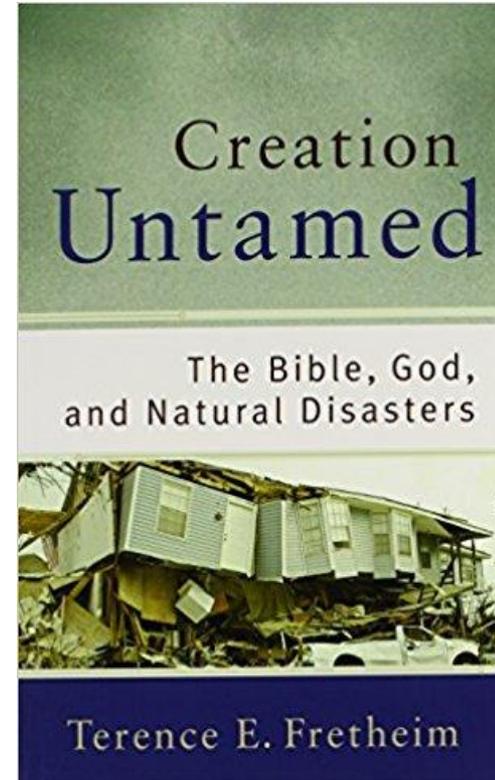
JEFFREY S. LAMP

Reading Green

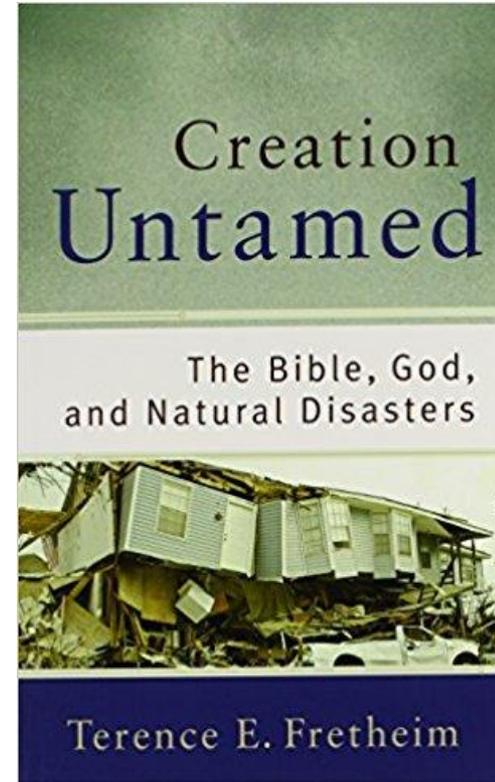
Tactical Considerations for
Reading the Bible Ecologically



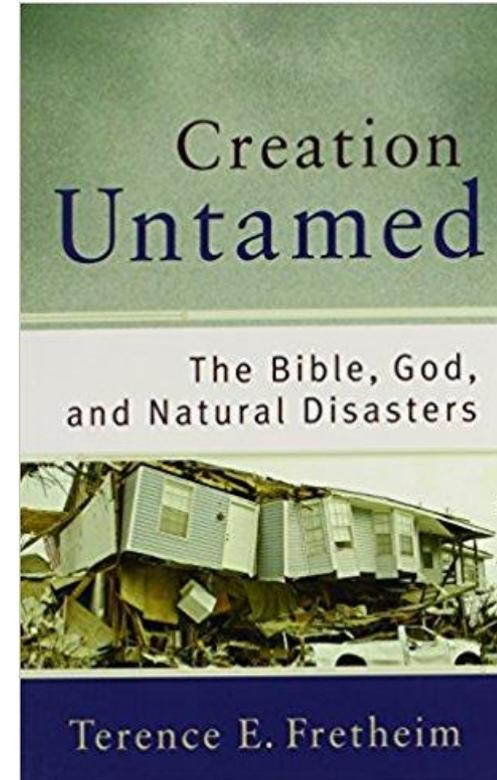
- Themes: God's **purposes** for creation and God's **judgement**
- Symbiotic relationship between ethical and cosmic orders
- Natural disasters are intrinsic to creational design, not result of fall
- God's speeches in Job teach us that **suffering** from natural phenomena is a consequence of how God created the world
- Allows the world to participate in its own becoming



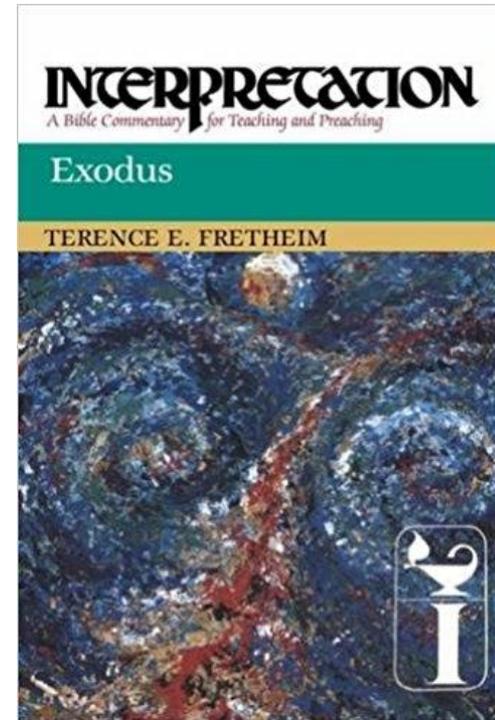
1. Humans are **finite** – distinction between consequences of sin and human finitude.
2. God has created a powerful and dynamic world, which is **risky** for humans.
3. God's use of **agents** in the creation of the world limits the connection between suffering and personal sin.



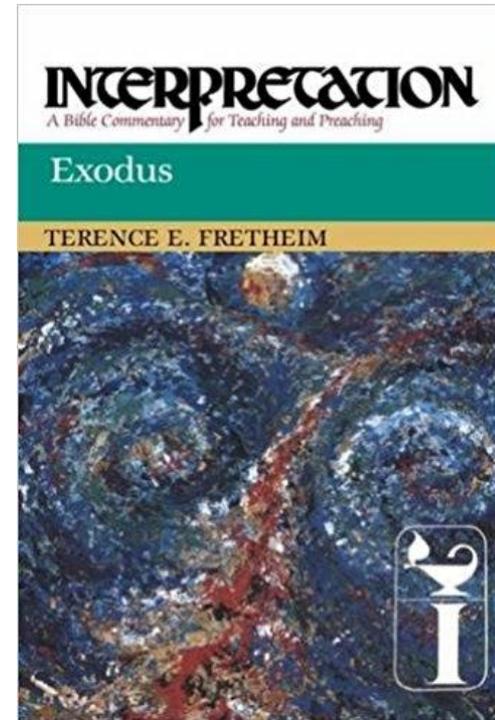
- Not best understood as God's intervention from the outside,
- But rather as effects or **consequences** of a particular sin.
- More **intrinsic** than forensic, growing out of the deed itself.
- Human actions, good or bad, elicit consequences in the created world.
- Purpose of the **moral order** is to restrain sin and evil,
- And so that God's good order of creation can be maintained.



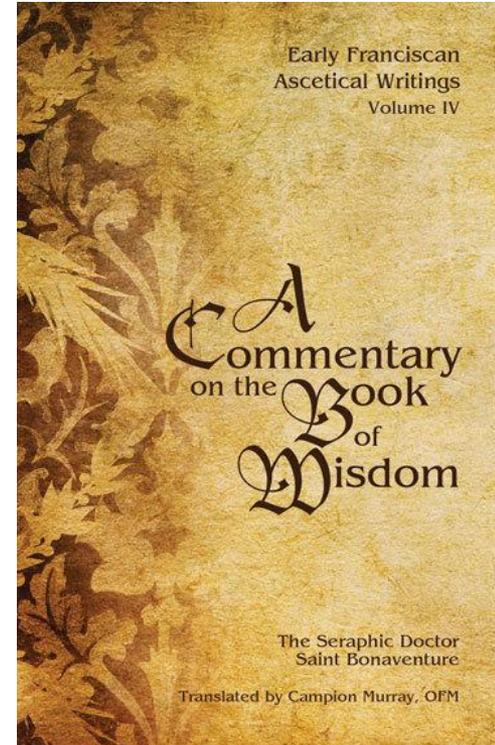
- Pharaoh represents the forces of **chaos** in mistreating Israel.
- Israel was fulfilling the creation mandate.
- Pharaoh sins against God and creation by opposing Israel.
- Plagues are effects of Pharaoh's **anti-creational** sins upon the cosmic order.
- Plagues are “signs” and “portents”
- So that Pharaoh “will know that the earth is the Lord’s” (Ex 9:29)



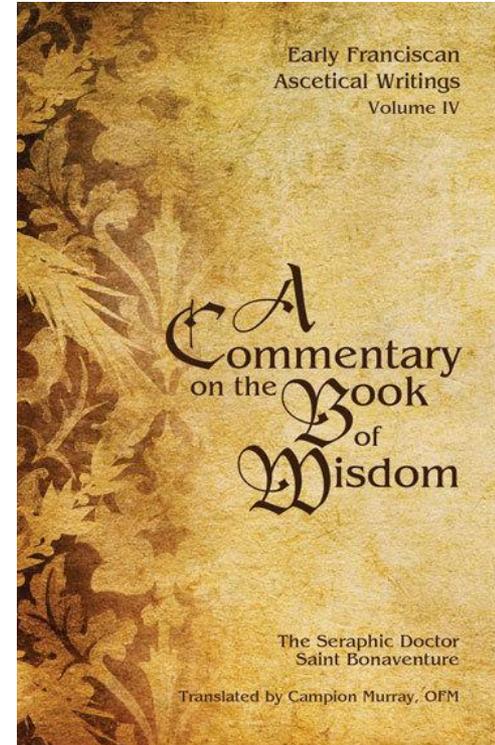
- “Nature in excess” or “Creation gone berserk”
- Pharaoh’s anti-life measures have unleashed chaotic powers that **threaten** creation as God intended.
- Plagues are commensurate with the offenses perpetrated by Pharaoh.
- Removing the plagues signals the restoration of God’s order.
- So the plagues ultimately function to prefigure the **restoration** of creation.



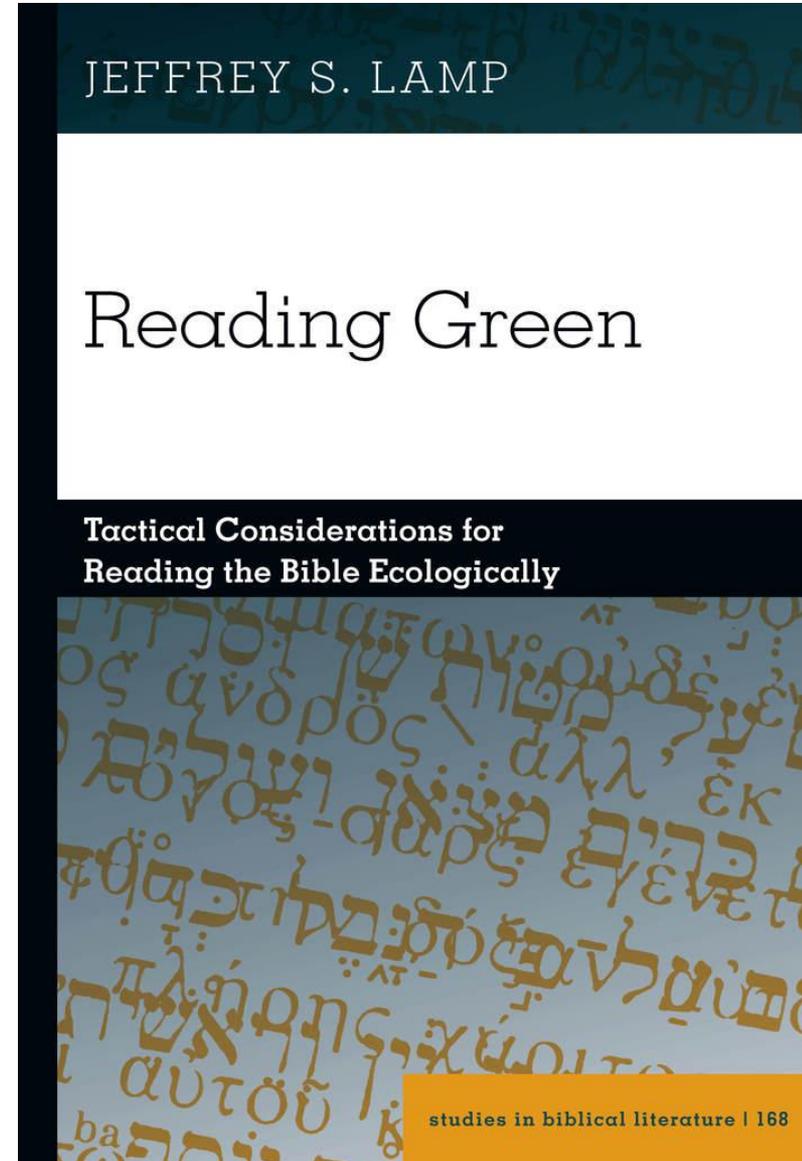
- Creation itself is **prime actor**, as judge of wicked and protector of righteous
- **Wisdom** and creation assist God in the judgment of those who defile the goodness of God's creation.
- God **working through creation** to bring union between God and human beings.
- Exodus is the proof of this divine activity to bring **salvation** to Israel, and by extension, to the world



- To compare and contrast Egypt's punishments and Israel's blessings
- Also comparing Egypt's sins and the punishment of the plagues
- **Idolatry** is introduced as the primary violation of God's order in the world.
- Creation is seen as a willing **partner** with God in judgment, as well as redemption,
- and not as an unwilling recipient of collateral damage.



- **The Lord will go out into battle determined to defeat his enemies, and use the creation itself as a weapon. (5:17)**
- **...and the forces of nature will join him in battle... (5:20)**
- **When we realize how vast and beautiful the creation is, we are learning about the Creator at the same time. (13:5)**
- **All the forces of nature fight to defend those who are righteous. (16:17)**
- **You created the universe; it is at your command. All creation uses its power to punish unrighteous people, but it becomes mild and kind to those who put their trust in you. Creation assumed all kinds of forms to show how you provide generously for all who pray to you. (16: 24-25)**
- **With the same act you punished our enemies and did us the glorious honor of **calling us to yourself**. (18:8)**



Affordances will help us understand how the dynamics explored in the plague narrative come into connection with the **current ecological crisis.**

**What guides our
choice of affordances?**

Which are normative?

**In Genesis 1-2, human
vocation is crafted in
terms of a benevolent,
priestly co-regency
with God, extending
God's loving reign in
the world .**

**However, Genesis 3
depicts human
rejection of this role →
negative affordances
(i.e. idolatry, etc).**

- “[Idolaters] have forsaken their vocation,
- subordinating themselves to aspects of the other-than-human creation,
- Thus disrupting the harmonious balance within the God/human/other-than-human triad.
- In this light, it would make sense for creation to **partner** with God to **punish** those who have forfeited this divinely ordained vocation,
- and to **protect** those through whom God is working to re-establish the proper order to creation.
- Fretheim’s insight is on target here: Pharaoh is punished through creation because his sin was to exploit for his own gain [**greed**] the people through whom God is working to bring order to creation.”

The vast wealth of resources afforded in the environment certainly may elicit choices for exploitation from those driven by greed,

The result is often the **destruction** of the very affordances that were so inviting in the first place.

The niche has been altered in a destructive way.

Consequently, the environment often **responds inhospitably** for all life forms, including human beings.

1. Philosophical cosmology **connects** the large/impersonal to the small/personal.
2. Universal structure of **nested affordances** for life and knowledge of truth/reality.
3. Affordances allow possible actions, but also **invite** behavior and **signify** normative actions.
4. Nature is **engineered** to communicate God's existence, benevolence and great **expertise**.
5. Nature's **judgements** invite repentance and trust in God's **redemptive** plan for us as image-bearing, priestly co-regents of creation.
6. Nature & Scripture **partner** for God's purposes.