So, what is this reality thing?

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Recap of Last Lecture

So, we have discussed “science” (which in our case was expanded to include logic and mathematics. We discovered that while science affords a set of principles that allow for the ongoing aggregation of (mostly) verifiable knowledge about the world, science has inherent limits to the set of things that can be known through scientific methods.

Let’s spend a few more minutes on this point.
The Upshot?

There are limits to:

- measurement.
- sampling.
- certainty.
- scientific method.
- formal reasoning.
- computability and complexity.
The Upshot?

Science is necessarily:

- uncertain (at some scale).
- accretive.
- approximate.
- social.
- constrained
- constructive.
What of “Reality”?  

It depends on your beliefs about the relationship to “the world”.

It is safe to say that in Science, “reality” is that which can be measured, modelled or discussed in a way that permits validation, experimentation, measurement, falsification.

What of scientific theories that are not measurable?
Some Relevant Topics

• Semiotics and linguistics: attaching structure and meaning to ideas both abstract and concrete.
• Science: characterising the behaviour of measurable things.
• Film, fiction, poetry and art: other thoughts on “reality”.
• Neuroscience: how current understanding of brain function, including perception and consciousness, account for our ability to be easily deceived (particularly visually).
• Computer graphics: how computational techniques will facilitate the creation of ever more convincing “realities”.
Related Books

The literature is huge, but some sample books include:

So, what is “Reality”?

Let’s stop here and discuss…
What is “Reality”?

1. The quality or state of being actual or true.
2. One, such as a person, an entity, or an event, that is actual.
3. The totality of all things possessing actuality, existence, or essence.
4. That which exists objectively and in fact.

See http://www.tfd.com/reality
What is “Reality”?  

*Reality* in everyday usage means “everything that exists.” The term “reality,” in its most liberal sense, includes everything that is, whether or not it is observable, accessible or understandable by science, philosophy, theology or any other system of analysis. Reality in this sense may include both *being* and *nothingness*, whereas *existence* is often restricted to being. (Compare with *nature*.)

What is “Reality”?

Reality is that which, when you stop believing in it, doesn't go away.

-- Philip K. Dick

Bladerunner, Total Recall, Minority Report, ...

I'm not crazy about reality, but it's still the only place to get a decent meal.

-- Groucho Marx

But compare to a scene in The Matrix!
What is “Reality”? Does this mean that things that do not exist are not part of our *reality*?

Indeed, as we shall see later, it would appear that many philosophers subscribe to this.

So, what of computer graphics and “virtual reality” which can “create” any number of fictional worlds?

Cue your next assignment!
Kinds of “Reality”

Note: this is a “strawman” proposal that will be subject to considerable criticism (motivated by Searle and Baggott)!

• Universal/Phenomenological.
• Social.
• Personal.
• Virtual.
• Augmented.
What brings you here?

- The role of the institutions (e.g., university)?
- Social “network”.
- Friends and family.
- Politics, career, religion, human values.

Why do you do what you do, believe what you do?
Expectations from all levels.
The “Universe”

“Physical” Reality

“Non-physical” Reality

All that could exist even if we did not exist, and even if it is not available to us through measurement, sensation, perception, introspection, deduction, … (I don’t want to argue right now about metaphysics, the “true” existence of nonphysical entities, etc. If you can imagine imagining it, then it could well populate this “universal reality”…OK, OK, it’s a crowded universe, but no matter!)

This is the “backdrop” or context for all the things that allow us to function as social beings in a social structure. For example, the concept of money is part of our social reality. So are social taboos, codes of behaviour, organised religion, etc.

There are at least as many “social realities” as there are “societies”.

Personal Reality

This is our sensation of that which is real only through direct experience, deduction, creation, or introspection. It defines each of us uniquely. All our personal categories (things that to you are beautiful and ugly, interesting or boring, dangerous or safe, …) “reside” here.

There is at least one “personal reality” per person.
The “Universe”

- matter
- energy
- space
- time
- “all that there is out there”
- ideas and forms
- “nonphysical entities”
- spirit

Social Reality

- science
- art
- religion
- culture
- politics
- health
- finance
- government
- law

Increasingly “detached” from the individual.

Personal Reality

- emotions
- language
- values
- perception
- mysticism
- consciousness
- cognition
- “I”

Reality is that which, when you stop believing in it, doesn't go away.

In fact, it you continually discover more about “it”. 
The "Universe"

- matter
- energy
- space
- time
- "all that there is out there"
- ideas and forms
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- spirit

Social Reality

- science
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- law

"We"

Consensus needed for: "I", "You", "We", PR, SR, U.

Continual "mediation" among all entities: one provides a view of another.

Stability amid considerable variation.

Many different PRs across individuals in small groups (families, homes).

Personal Reality

- introspection
- communication
- emotions
- language
- values
- perception
- mysticism
- consciousness
- cognition
- "I"

"I" and "You"
Everything is mediated!

- What is “developed” vs. “inherited”?
- Is direct experience of reality possible?
- What is “real” vs. mental.
- What is behavioural or existential vs. essential and necessary?
- What is “consciousness”?
- Is there anything about this that is peculiar to our physical make-up?

See Thomas Nagel, “What is it like to be a bat?”, 1995.
Everything is modelled/modelling!

We construct:
- Mental representations (implicit models).
- Explanations (explicit models).
- Stories (narratives that bind models).
Are “Realities” Independent of “I”? 

• Does personal reality exist independent of the mind? 
• How do I come to recognise “You”? 
• How do a bunch of Yous become “We”? 
• Does social reality exist independent of I? 
• What about this universe thing anyway?
What of “Virtual Worlds”

• What reality can computer graphics make?
• Diverse ontologies.
• Does it have to be consistent?
• What is required to make it a “reality”?
• Does it extend or just visualise reality?
Binding to the “Real” World

- A realist believes there is something “out there”.
- But is it robust?
- Is it contingent?
- How do we come to this conclusion?
- How do we share it with one another?
- Can a reality be completely private?
- Can reality be directly experienced?
Binding to the “Real” World

We require language for this binding.
The fragrant smooth red apple was crunchy and tart.

Great, but *none* of these identified concepts exist outside us.

So where are we?
What of “Psychological” Reality?

Let’s have a look at “Milo”.
Robustness and Contingency

Perhaps “reality” is robust but it is mediated and co-evolves with myriad factors.

Reality is that which, when you stop believing in it, doesn't go away.

-- Philip K. Dick
Choice?

With all this “mediation” and “lensing”, do we have a choice in the matter:

- As individuals?
- As a culture or society?
- As a species?

Or does nature make the choice for us?