

*Suggestions for discussions  
in  
Tutorial I:  
What is information?*

The background features a complex network graph with numerous nodes connected by red, blue, and white lines. Many nodes are represented by circles containing binary code. A large, semi-transparent circular overlay contains the main title text.

# OUTLINE OF DISCUSSION TOPICS

- **First of all, let us get to know each other!**

We will start from a round of self-introductions where everybody in the group (including students and TAs) says something about themselves.

Examples:

- your name
- which major are you from
- one interesting thing about yourself (a hobby, a passion, a curiosity, etc...)

- **Let's appreciate the impact of the information revolution.**

Is there an information technology that affected your life in special way?

e.g. online courses, social media, computer games, ...

Was it for good or for bad?

In your lifetime, did you see a technology or an application you did not expect?

- Discuss the difference between the idea of “information” in everyday life and the idea of “information” in the technical sense.

### “quantity of information” vs “quality of information”

e.g.

- amount information on social media.  
(did you know? on average, on Twitter there are 6000 tweets every second)
- news vs fake news  
Can you find other examples?

### information about what?

- when we talk about “number of bits,” we don’t care what they are about, but in everyday life we do care. Can you think of some examples?
- in everyday life, the medium matters: sounds, images, words, flavors, smells, touch feelings, are all “information,” but feel very different to us.  
Can we completely describe a painting or a music in words?

- **Is information subjective or objective?**

e.g. when listening to a piece of music, or to an art performance, some people may pick up more details than others.

cf. Confucius: “Everyone eats and drinks; yet only few appreciate the taste of food.”

Does “information” depend on the person using it?

**Can we talk about information without talking about someone who uses this information?**

- **Let us discuss, the “It from Bit” slogan.**

**Do you think that everything in the world is really made of information?**

e.g. what about *yourself*? Can one describe everything about you in terms of bits? what if, in the far future, someone had the technology to scan these bits and make perfect copies of it? Which one would be the true “you”?

**If information is fundamental, can it be destroyed? Can it be created?**

If it cannot be destroyed or created, and everything is information, how about us?

# SOME INSPIRATIONS



*Marylin Diptych, by Andy Warhol*



## THE INVENTION OF MOREL

and Other Stories (from *La Trama Celeste*)

by Adolfo Bioy Casares

translated by Ruth L. C. Simms



Norah Borges de Torre

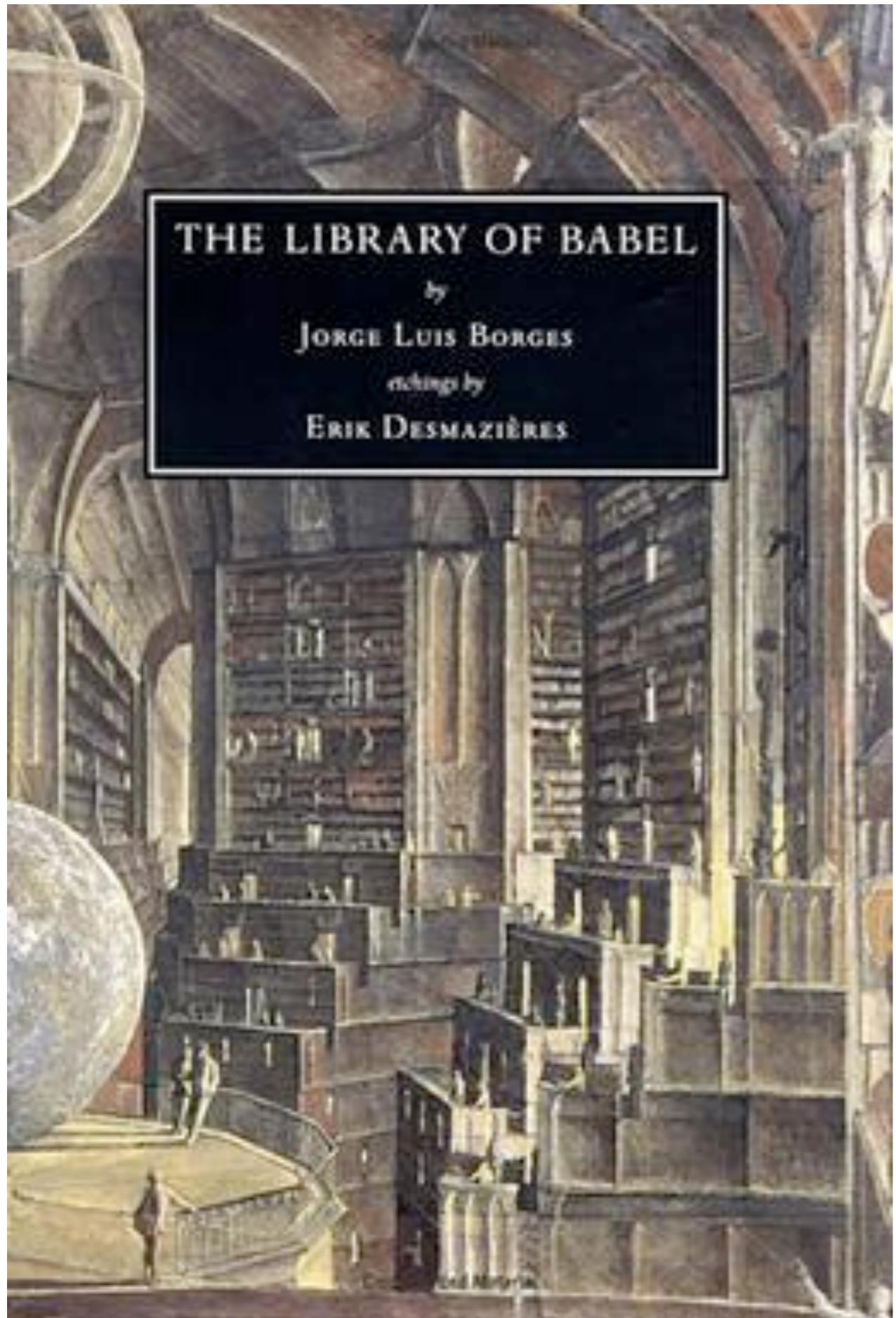
### The invention of Morel.

Short science-fiction novel

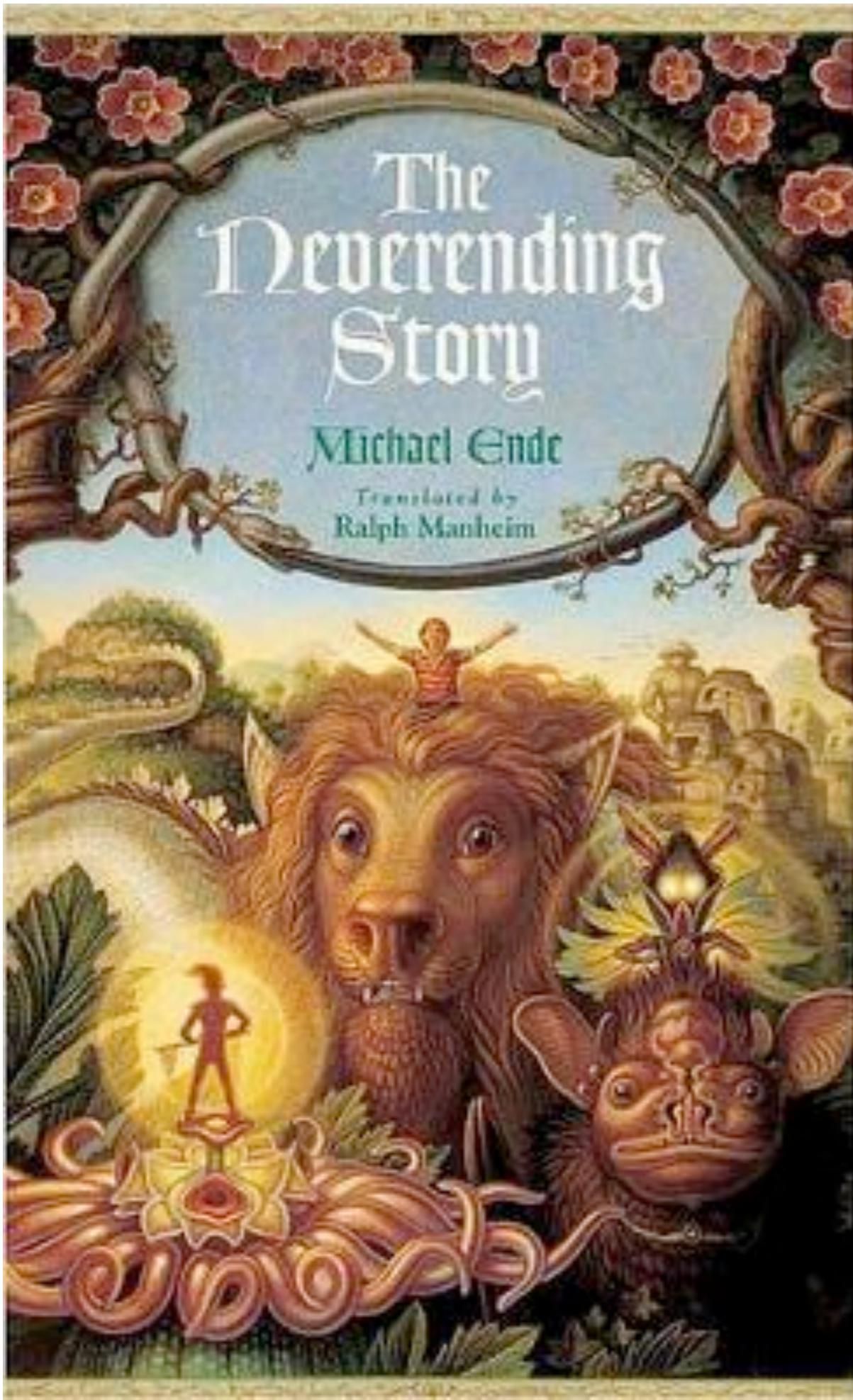
(+ several movie adaptations)

around a scientist who invented a machine  
that can copy snapshots of people's life.

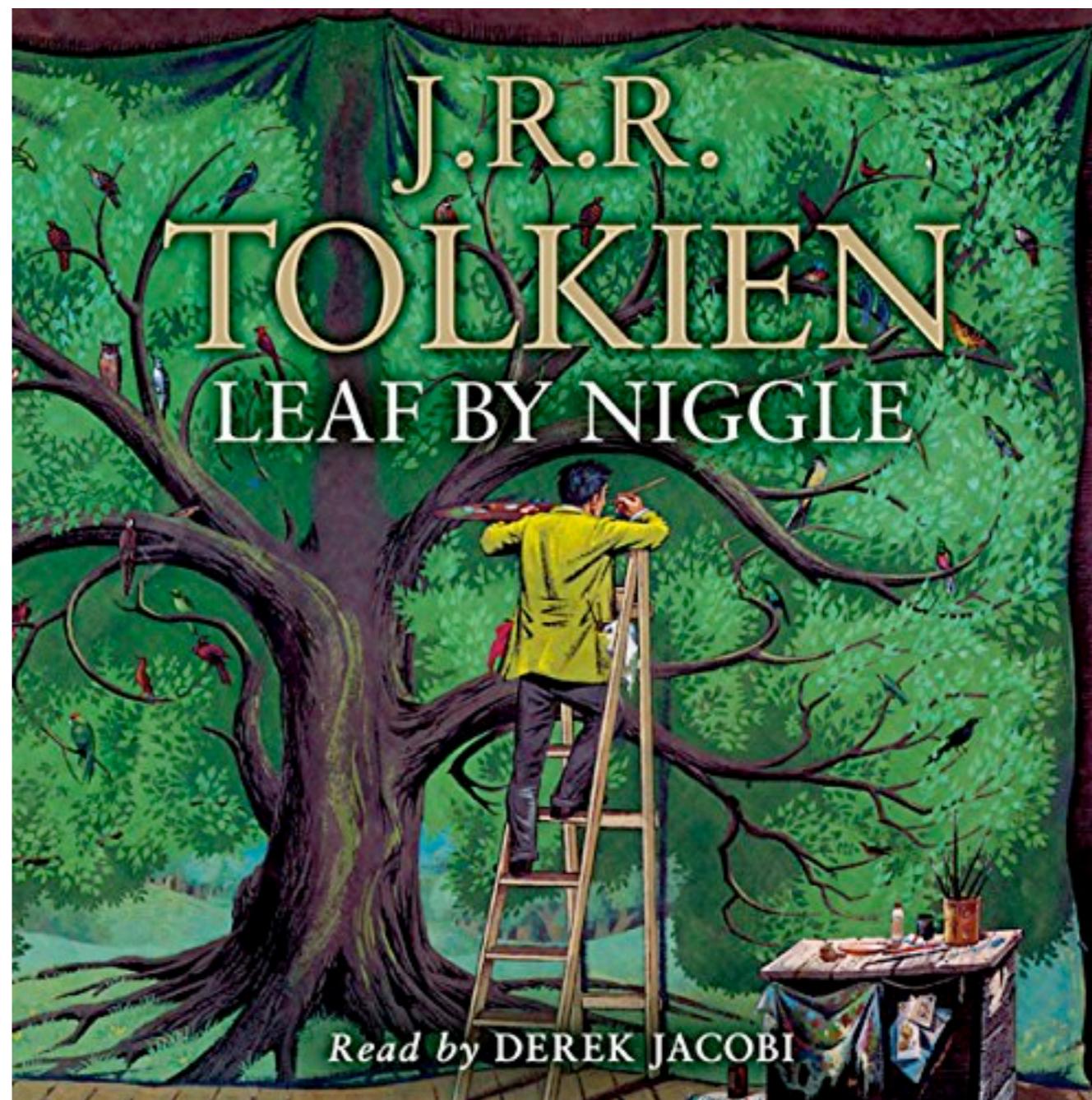




**The Library of Babel:** a short novel about a library containing all possible books with all possible combinations of letters.



**The Neverending Story:** a complex fantasy book delving into the relation between stories ("information") and reality.



**Leaf by Niggle:** a short story about a painter whose painting becomes "real."

# GETTING STARTED

To kick off the discussion, let us start from a self-introduction.

After that, you can start discussing,  
following the outline given before.