9.10

And what is it to be human and alive and exercise your humanity in that kind of exchange?

0. Prologue

wartime cryptography 战时密码

ominous-looking 看起来不吉利的

toast烤面包

stare dumbly 默默地看着

parse 解析语法

interest and intrigue me引起我的兴趣

a judging panel 裁判委员会

confederate 同盟

gamut 整个范围

one will be able to speak of machines thinking without expecting to be contradicted谈及机器思考而不会被反驳

1. Introduction

One of the first winners, in 1994, was Wired columnist Charles Platt. How would he do it? By “being moody, irritable, and obnoxious,”易怒的 he says—which strikes me as not only hilarious and bleak but also, in some deeper sense, a call to arms战斗的号令: How, in fact, do we be the most human humans we can be—not only under the constraints of the test, but in life?

Incarnation 化身

Loebner Prize 勒布纳人工智能奖

Orchestrate 统筹

But in any event,无论如何 the central question of how computers are reshaping our sense of self, and what the ramifications of that process will be, is clearly the crucial one.

计算机如何让我们自己重新审视自我

inscrutable amalgam of material 神秘的一堆材料

in charge of the logistics 负责后勤

under the auspices of 在……的主持下

nonfiction 非虚构类

roster 花名册

After briefing me a bit on the logistics of the competition, he gave me the advice I had heard from confederates past to expect: “There’s not much more you need to know, really. You are human, so just be yourself.”

deftly 灵巧地

We go through digital life, in the twenty-first century, with our guards up.

An odd twist: we’re like the thing that used to be like us. We imitate our old imitators, one of the strange reversals of fortune in the long saga of human uniqueness.

Debunk 揭穿

Oxford philosopher John Lucas says, for instance, that if we fail to prevent the machines from passing the Turing test, it will be “not because machines are so intelligent, but because humans, many of them at least, are so wooden.” 呆板的

Part of what’s fascinating about studying the programs that have done well at the Turing test is that it is a (frankly, sobering) study of how conversation can work in the total absence of emotional intimacy.

Nemeses 报应

But I prefer, for a number of reasons,

the notion of rivals—who only ostensibly want to win, and who know that competition’s main purpose is to raise the level of the game. All rivals are symbiote. They need each other. They keep each other honest. They make each other better. The story of the progression of technology doesn’t have to be a dehumanizing or dispiriting one. Quite, as you will see, the contrary.

9.11

A program is a sequence of instructions that specifies how to perform a computation.

It is just step-by-step instructions that the computer can understand and execute. Programs often implement algorithms, but note that algorithms are typically less precise than programs and do not have to be written in a programming language.

“Fortunately, I am human; unfortunately, it’s not clear how much that will help.”

The author feels at a loss when he begins to think about how to convince the judges he is a human and I think this is because he is not sure what the difference is between human and Artificial Intelligence, or say, program.

The author’s confusion got me thinking: What is humanity? What makes us unique?

Charles Platt won the competition in 1994 by being moody, irritable, and obnoxious. His story inspires me to think that computer works without emotional intimacy. As I learned from the online textbook, a program is a sequence of instructions that specifies how to perform a computation. Any AI, is ultimately a program so that they can just follow the set instructions. So, if I need to convince someone of the fact that I am a human being, I will firstly answer his question and then express my feelings like “I don’t like talking about this” or “I think we should change to another more interesting topic”.

But as mentioned in the book, people are becoming more and more wooden and unable to make good conversations, so I think the successful process also depends heavily on the judge’s performance. The argument that “But the AI knows how to deftly guide the conversation away from their shortcomings and toward their strengths, what conversational routes lead to deep exchange and which one fizzles based on huge databases and statistical analysis on these archives.” underlines the importance of human learning to connect meaningfully with each other within the limits of language. So I think both of the judge and confederate need to learn communication techniques to make the convincing-human-human-is-human process successful.

情绪化的

To which degree AI can imitate human?

作者也提到，这让自己思考，如何成为一个 the most human humans in life

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计算机如何让我们自己重新审视自我

For instance, does the fact that computers are so good at mathematics in some sense take away an arena of human activity, or does it free us from having to do a nonhuman activity, liberating us into a more human life?

The Turing test tries to answer the question that how would we know if machines could be constructed to have a mind?

There are no restrictions on what can be said: the dialogue can range from small talk to the facts of the world (e.g., how many legs ants have, what country Paris is in) to celebrity gossip and heavy-duty philosophy—the whole gamut of human conversation.

谈话的内容没有限制，那么我会避免开启一些机器人擅长的话题，例如computing，或者是一些容易存储在database的commonsense的东西

I believe everyone has notices the confederate motto -- “just be yourself”.

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the Turing test is, at bottom, about the act of communication.

Oxford philosopher John Lucas says, for instance, that if we fail to prevent the machines from passing the Turing test, it will be“not because machines are so intelligent, but because humans, many of them at least, are so wooden.” 呆板的

the test raises a number of questions at the intersection of computer science, cognitive science, philosophy, and daily life.

I see its deepest questions as practical ones:, as meaningfully as possible, How do we connect meaningfully with each other within the limits of language and time? How does empathy work? What is the process by which someone comes into our life and comes to mean something to us?

Part of what’s fascinating about studying the programs that have done well at the Turing test is that it is a (frankly, sobering) study of how conversation can work in the total absence of emotional intimacy.

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9.18

# I think the *“convince someone you were \*you\*”* requirement is based on the premise that we have known each other because it seems impossible to convince a stranger I am \*I\* from my perspective.

The author talks a lot about “act like myself instead of describing myself” and “pay attention to manner, not topic” in the article to emphasize the key role of personality. I am not that conversable but I want others to feel being cared when chatting with me through text, so I often us “…………” during the online chat to show “I am listening and thinking” when I don’t know what to reply at once. I see it as a good way to reduce the embarrassment of silence. I use this expression so frequently that the members in the chat group can recognize me at once when I change my nickname or head portrait. I think it works well if I want to convince someone who has ever talked with me I am “I”.

The other point the author mentions I think is good is using memory. Just talks about something that I do together with the one I want to convince. I think he will recognize I am just that person. And I think this strategy works better if I add some detailed descriptions.

9.24

If you had to give up either your left-brain functions or your right-brain functions, which would you give up? Is the one you wouldn't give up the "soul" of who you really are? Answer briefly with reference to The Most Human Human, chapter 3.

I would give up my left-brain functions if I had to. However, I don’t think the right-brain is my soul. I make such choice just because current technology mimics reasoning better than perceiving or recognizing process of human mind according to the author. It may be true that every creature has the powers of recognizing reality while only human could reason, which is mainly controlled by left-brain. But it is more important, I think, to have emotions. If I give up the right-brain, I would live like the von Neumann machine, which is an image of one’s conscious mind where you tend to think: you’re doing long division, and you run this algorithm step-by-step, just as Ackley says. I would rather live like a “dog” who can’t think than live like a “computer” who can’t perceive. Dogs can’t reason but they can feel happy and sad, which I believe is indispensable in daily life. After all, it is a tricky question and I hope scientists can insert something like integrated circuit into my brain to help me reason like a computer if I gave up my left-brain function.

Aristotle took what I think is a pretty reasonable approach and decided to address the

question of humans’ purpose by looking at what capacities they had that animals

lacked. Plants could derive nourishment and thrive physically; animals seemed to have

wills and desires, and could move and run and hunt and create basic social structures;

but only humans, it seemed, could reason.

His answer becomes the most famous sentence in all of philosophy. Cogito ergo sum. I

think, therefore I am.

I think, therefore I am—not “I register the world” (as Epicurus might have put it), or “I

experience,” or “I feel,” or “I desire,” or “I recognize,” or “I sense.” No. I think. The

capacity furthest away from lived reality is that which assures us of lived reality—at

least, so says Descartes

The left hemisphere, it seems, is constantly drawing cause-and-effect inferences from

experience, constantly attempting to make sense of events.

right

hemisphere are much less distinct. It was presumed, usually contemptuously, to be

more “primitive” than the left, the latter being seen as the unique 􀉻ower of human

evolution. And in a sense this is correct: the left hemisphere is more sophisticated

and specialised, a very late outgrowth of the primate, and especially the hominid,

brain. On the other hand, it is the right hemisphere which controls the crucial

powers of recognising reality which every living creature must have in order to

survive. The left hemisphere, like a computer tacked onto the basic creatural brain,

is designed for programs and schematics; and classical neurology was more

concerned with schematics than with reality, so that when, at last, some of the

right-hemisphere syndromes emerged, they were considered bizarre.

In the late ’80s and through the ’90s, says

Shiv, neuroscientists “started providing evidence for the diametric opposite viewpoint”

to rational-choice theory: “that emotion is essential for and fundamental to making good

decisions.”

10.4

Give an example of when you were interacting with someone where you used "book" responses, as described in The Most Human Human, chapter 5. What's an example of a time when you or the person you were talking to got "out of book" unusually fast?

We start off the same and end up the same.

So here was a small-talk, stranger-on-a-plane judge, it seemed. I had this odd

sensation of being in that classic ɹlm/TV position. “I have something to tell you.” But

that something was … myself. The template conversation spread out before me: Good,

you? / Pretty good. Where are you from? / Seattle. How about yourself? / London. / Oh, so

not such a far trip, then, huh? / Nope, just two hours on the train. How’s Seattle this time of

year? / Oh, it’s nice, but you know, of course the days are getting shorter … And more and

more I realized that it, the conversational boilerplate, every bit as much as the bots, was

the enemy. Because it—“cliché” coming from a French onomatopoeia for the printing

process, words being reproduced without either alteration or understanding—is what

bots are made of.

During the orientation, when I meet a new student, we would always have a “book” conversation.

-Hi, I am XXX

-Hi, I am XXX

-How do you feel till now?

-Good. How about you?

……………………

(We talked about our specialization, registered courses, etc.)

……………………

-Nice to meet you.

-Nice to meet you!

It is nearly a template when we SI student use when talking with the people we meet for the first time. Such template conversation could end fast when I found the person I was talking to came from a country or a city I like. For example, when I talked with a person from Tokyo, Japan. I didn’t ask her questions about the specialization or courses. Instead I asked her many questions about the climate there and which restaurants were popular among local people. It is more interesting to talk about such things.

As for the class, I think everything goes well for me.

10.12

1.

The conversation that “out of book” has more surprisal.

The conversation that "stays in book" would be easier to compress because it has less uncertainty.

2.

I think of the questions we meet in math class. Usually there is a long paragraph describing the background and giving all the parameters and statistics. Then, three sub-questions follow. The first one may require you to use all the conditions in the question stem. The second one may say:” calculating XX if parameter a is not given”. The third question may say: “calculating XX given the new condition that……”. The three sub-questions use the information in the question stem but it only mentions the differences instead of repeating the whole question. I think it is like delta compression.

10.25

1. Suppose you write and edit a long text file over the course of several days, saving a new version every 15 minutes or so (***myfile1.txt, myfile2.txt, myfile3.txt***,...). Eventually, you have 100 different versions of the file. Now consider the whole directory containing all 100 versions of the file. Would it have a lot of redundancy? As a compression technique, how might you take advantage of the unix diff command in order to reduce the total amount of space required to store all 100 versions of the file?

1.There must be a lot of redundancy.

Use diff command and save the difference between two files into a new ‘diff’ file.

Diff myfile1.txt myfile2.txt > diff1.txt

Diff myfile2.txt myfile3.txt > diff2.txt

…………………………

Diff myfile99.txt myfile100.txt > diff99.txt

Then just save the ‘myfile1.txt’ and all the ‘diff’ files in the directory.

2. Think about assigning entropy scores to people instead of documents. If you were to compute information entropy scores for all the students you've met since enrolling at the University of Michigan, which of them has the highest entropy and why?

2. I met a student in an ELI class and his background surprised a lot. He is from Romania and I had never met a person who came from the same country before. His major is space science and this shocked me a lot because I thought people who studies such high-grade discipline are all scientist and had never thought I could meet them in real life. This person gives me much surprisal so I think he has the highest entropy.

11.1

Read Success of Open Source, preface and Chapter 1.

Answer the following questions.

1. Briefly define open source software in your own words.

Open source software is a software that is voluntarily developed by a group of programmers who are different in terms of geography, culture, language, and other characteristics, and connected mainly via Internet. The source code of the open software is open to public and is nonproprietary. Anyone is free to use the open source software for any purpose.

2. Weber argues that you should be surprised that there is high quality open source software out there and offers some questions/puzzles that he thinks need to be answered in ordered to explain how that has happened. Which of those questions do \*you\* think really are puzzling, and which, if any, do you think have obvious answers?

I think the Motivation of individuals is easy to understand because developing a complex and useful software give programmers a sense of achievement, and self-fulfillment is the highest level of human need according to Maslow's Needs-Hierarchy Theory.

Coordination question is a little puzzling. All participants only communicating with each other online is not a problem. I have participated in an online translation group and find no coordination. Usually, the volunteer group leader broke down the video and every participant selected whatever we would like to translate. Then we can finish individual work on time. However, the problem here is we had different translation style so it could happen that same meaning was expressed in different sentence. I don’t know how open source community fix this problem because programmers have different coding style. How they reach a consensus on the name of a function, or other similar things?

Complexity question is not that difficult to answer because I think mistakes won’t scale geometrically as the number of programmers if all of them are proficient programmers, especially when we are motivated to do the project.

3. Was there anything from this chapter you found confusing? If so, what?

No.

11.13

1. Why is the GPL described as `viral`? Do you think it gives programmers more or less "freedom" to do what they want with software than the BSD-style license does?

The GPL is described as viral because It emphasize that free software “infects” other software with its licensing terms. Any derivatives from the original source code should follow GPL—they should remain free and not be used for commercial purpose.

I think BSD-style license gives programmers more freedom because it did not require derivatives to remain free but instead allowed the creation of proprietary products from open code. Programmers are allowed to do everything they want as long as they give credit to writers of the original code.

2. The chapter describes the idea of pipes as an important breakthrough. It's referring to the < > and | operators that you used in the unix shell previously. Why are those a breakthrough?

Because it is a key element for programming modularization, which is the division of a complex task into a series of simple tasks that can be carried out by essentially autonomous modules that communicate through standard interfaces.

Modularization led to the idea of software not as a tool per se but as a “toolbox.”

3. What material from the chapter would you like to discuss in class?

Are we supposed to comply with one license if we want to develop open source software?

11.20

1. The linux project uses git to organize the work of all the contributors. Take a look at the [linux project on github (Links to an external site.)](https://github.com/torvalds/linux). Take a look at the recent commits. Click around to see how many people have made contributions recently. Also check out the github page for [Runestone (Links to an external site.)](https://github.com/RunestoneInteractive/RunestoneServer), and for [my fork of it (Links to an external site.)](https://github.com/presnick/runestone) to make this online textbook. Report on something interesting you found from exploring these public git repositories.

The commits on Saturday and Sunday are much less than other five days in a week.

Some central members do most of the coding (commits), and much more comparatively peripheral participants contribute in more indirect and sporadic fashion (additions and deletions).

Some programmers committed largely to one project but only in a certain period of time.

2. Brooks makes an argument that communication complexity grows with the square of the number of people participating in a project. Why might that be true? And what are the things you could do in organizing a project to make it not be true?

It might be true because the number of communication paths in a team with n members is n(n-1)/2.

Coordination cost

Unnecessary pairwisegf

One possible way is better estimate how many people is needed in the early stage of a project. Avoid the need of adding people during the project.

Another possible is having one leader who makes most of the decisions. Other members mainly communicate with the leader so the new arrivals will not disturb the original communication network that much.

3. What material from the chapter would you like to discuss in class?

How programmer communicate via emails? Do they quarrel with each other? Who will make the final decision when conflicts can’t be reconciled?