

Part 1

I tested Siri on my iPhone.

Over-answering :

Me: Hey Siri, make a phone call.
Siri: Who would you like to call?
Me: My mobile.
Siri: Calling xxx mobile.

Other-answering:

Me: Hey Siri, set an alarm.
Siri: Set the alarm for when?
Me: Turn off.
Siri: Which alarm would you like me to turn off?
Me: All.
Siri: Ok, all your alarms have been turned off.

Answer revision:

Me: Hey Siri, make an appointment.
Siri: What date and time is your appointment?
Me: Tomorrow.
(Tomorrow is Monday.)
Siri: What time is your appointment?
Me: The day after tomorrow.
Siri: What time is your appointment?
Me: 11:30.
Siri: I scheduled your appointment for Tuesday from 11:30 to 12:30.

Part 2

Agreement aspect: This aspect indicates how the current utterance unit affects what the participants believe they have agreed to. These relations occur in contexts where one agent has made some kind of proposal such as a request that the hearer do something, an offer that the speaker do something, or a claim about the world.

Question: Would you like hotdog and some coffee?

Answer:

1. Yes please. (Accept)
2. A cup of coffee would be delightful. (Only coffee)
3. No thanks. (Reject)
4. I'll talk to you later. (Unknown)

Understanding aspect: This aspect concerns the actions that speakers take in order to make sure that they are understanding each other as the conversation proceeds.

A: Could you please hand me that book?
B: Which one?
A: The green one.
B: I have two greens. Cat or dog?
(Picture in the book cover.)
A: Cat.

Part 3

Firstly, it is easy to analysis monologue to understand context and get all the information. When we change to another topic, we can also extract the corresponding information of that topic. However, inferring the meaning in a dialogue requires a contextual information (e.g. questions and answers). Sometimes, when we change to another topic in a dialogue suddenly, it can be hard to get the right information from the complex context.

Example

Monologue:

I went to visit Jane this morning. I have a great time with Jane. After lunch, I decided to go back home. On my way home, I met my brother John. He told me today is grandfather's birthday and we should visit him, so we went to my grandfather's home together.

Dialogue:

A: What did you do today?
B: I visited Jane in the morning and we have lunch together.
A: That's great! Did you go back home then?
B: I was going to go back home and then I met John in the street.
A: Wow, I have't met John for a while. How is he doing?
B: He is good.
A: So you go back home together?
B: No, we went to my grandfather's house.

In addition, it is quite common that people may modify their answer multiple times for a certain question in a dialogue, and sometimes their answers are not even related to the question. To solve this kind of dialogue phenomena, we may need to design a mechanism to track the context and solve other-answering problems. However, such phenomenas rarely occur in monologue.

Example

Monologue:

I probably will go to Morocco for the holiday this year.

Dialogue:

A: Where do you wanna go for holidays?
B: I wanna go to Thailand, I just fed up with cold weather.
A: You've been in Thailand last year, have you?
B: Yeah, maybe I should go to Morocco this year.

Part Bonus

Why is it important that a dialogue system can reproduce basic features of human dialogue?

According to the psychological research, speech is strongly associated with human-to-human interaction and if something speaks, it is reasonable to perceive it as human-like, therefore, computers are expected to be more humanity when we are talking to them.

Except speech, non-verbal behaviors also play a very important role to help us better understanding the communication. We can not get the non-verbal behaviors such as the facial expression from the computer, so if the computer do not even have the basic features of human dialogue, it can be very annoying and we would not willing to continue the dialogue.

And that is why we designed HCI experiments such as Wizard of Oz to improve the existing dialogue system.