

Can Machines Be Polite?

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Can machines be polite?

Machines have been *annoying people* ever since human-machine interaction became nontrivial.



Can machines be polite?

“Our software-based products
irritate us *because they aren't polite,*
not because they lack features.”

- Alan Cooper

Inventor of Visual Basic

The Inmates are Running the Asylum



Can machines be polite?

The study of politeness in human language can tell us something about how to make machines easier to work with.



Can machines be polite?

- Preliminaries
- Theory of politeness
- A rogues' gallery of impolite machine behaviors
- Conclusions



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Preliminaries

Preliminary #1:

Politeness is more than skin deep.



Preliminaries

Politeness is more than skin deep.

Peppering an impolite interaction
with politeness markers
just makes it more annoying.



Preliminaries

“I’m sorry, sir, I didn’t understand.

Please repeat your most recent request.”



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Preliminaries

Preliminary #2:

The inanimate world is **inherently not polite**; it does nothing to accommodate humans.

Many of us **like matching wits with inanimate matter** and have become engineers.



Preliminaries

On the other hand...

Some people are **very put off** by a machine that **detects their errors** (and is right!).

That's why some people **hate computers**.



Preliminaries

Seeing the computer as **conscious**
(verbal) is what triggers the hate.

The more humanlike a machine is,
the ruder it can be.



Preliminaries

The lesson?

Machines should not pretend to be more humanlike than they really are.



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Theory of politeness

J. L. Austin (1962):

Locution

What you say

≠ **Illocution**

What you mean

≠ **Perlocution**

How the hearer takes it

The hearer has to decide how to understand you.



Theory of politeness

H. P. Grice (1975):

Conversation is a cooperative activity,
often in support of other cooperative activities,
and has its own rules (“maxims”) of cooperation.



Theory of politeness

Penelope Brown and Stephen Levinson (1987, condensed):

Positive politeness (what to do):

Enlist hearer's cooperation.

Find common ground.

Negative politeness (what to avoid):

Do not presume hearer's willingness (or attention).

Do not coerce (control) the hearer.

Do not require hearer to make effort to understand.



Theory of politeness

Penelope Brown and Stephen Levinson (1987, condensed):

Positive politeness (what to do):

Enlist hearer's cooperation.

Find common ground.

GRANTED:

Human has already
chosen to use
computer as a tool.

Negative politeness (what to avoid):

Do not presume hearer's willingness (or attention).

Do not coerce (control) the hearer.

Do not require speaker to make effort to understand.



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IMPORTANT PART:

Computer must not be a pest.



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Rogues' gallery

- Demands for attention
- Demands for control
- Demands for effort



Rogues' gallery

- Demands for attention
- Demands for control
- Demands for effort



Demands for attention

**Demanding more attention than appropriate;
treating a triviality like an emergency.**

**“Attention! An update of BozoPlayer is
available NOW! Get it RIGHT NOW!”**



Demands for attention

Indicating a state change by repeated demands for attention, as if it were a series of events.

“Bzzzzzzzt!” every 2 minutes from the clothes dryer when it’s doing its final 20-minute tumble.



Demands for attention

Acquiring attention and failing to acknowledge it through progress indicators.

A common problem, especially in scientific software. Developers have super-fast machines and networks; the rest of us don't.



Rogues' gallery

- Demands for attention
- Demands for control
- Demands for effort



Demands for control

Stepping the user through a script rather than letting the user control the machine.

Filling out a form is *much* better than answering questions one-by-one.

In a “wizard,” user should be able to go back as well as forward.



Demands for control

Setting up an unnecessary roadblock before the user can proceed.

“You must insert the CD before installing the network card... You must install the network card midway through the program on the CD.”



Demands for control

Not letting the user cancel a time-consuming operation.

Common problem with disk and network operations. Computer *insists* on waiting the full time-out period even if you could have told it that the disk or net is no longer there.



Demands for control

Falsely claiming to be ready.

When booting, Windows XP switches from hourglass to arrow *before* it is actually ready to respond.



Demands for control

Falsely claiming to be ready.

In Windows programming, switching to the hourglass cursor is up to the programmer.

Why can't the OS put up the hourglass whenever a program isn't listening for input?



Rogues' gallery

- Demands for attention
- Demands for control
- Demands for effort



Demands for effort

Making the user work hard (or even use external information sources) to decipher a message.

“Error 1221. List index out of bounds (2).”
(in a mail-reading program)



Demands for effort

Making the user do computations or database chores.

For decades, U. of Georgia students had to look up building numbers manually to interpret their computer-printed class schedules.

*I thought we had a **COMPUTER** here!*



Demands for effort

Making the user do menial work.

“Press 1 for sales, 2 for support...
press 1 for cameras, 2 for printers...
press 1 for inkjets, 2 for lasers...”

Are we doing a binary search of the entire universe???



Demands for effort

Throwing away the fruit of the user's labor.

If you accidentally press 3 instead of 2 during that binary search, you may have to hang up and start over.



Demands for effort

Throwing away the fruit of the user's labor.

If you make a mistake on a web form, the whole form may come up *blank* when you go back one step.



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Conclusions

Computers (and other machines)
can be real pests!

The study of human-language politeness
can help us analyze the problem.



Conclusions

Now what do we *do* about the problem?

- Make programmers and machine designers aware of the user's experience.
- Classify examples of impoliteness so programmers, designers, and testers can be forewarned.



Conclusions

Now what do we *do* about the problem?

- Consider impolite behavior as *a kind of “bug” to be hunted down and eliminated during testing, as well as to be prevented by good design.*





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