The Role of Metaphor in Interaction Design

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A metaphor is “a device for seeing something in terms of something else. It brings out the thisness of that or the thatness of a this.”

—Kenneth Burke, 1945
The Four Master Tropes

METONOMY: embodiment of the ethereal

SYNECDOCHE: the part for the whole

IRONY: two levels of meaning

METAPHOR: perspective

“To consider A from the point of view of B is, of course, to use B as a perspective upon A.” —Burke
But, soft! what light through yonder window breaks?

It is the east, and Juliet is the sun!

—*Romeo and Juliet*, II.i
“Our conceptual system is fundamentally metathoric in nature.”

—George Lakoff and Mark Johnson
He spends his time wisely. Summer is just around the corner.

There’s a hole in that theory. She’s an old flame.

The class tried to keep up with the schedule.

She profited from the experience. He has a screw loose.

My thoughts are scattered.

She went back to sleep. He cherishes that belief.

He exploded. I couldn’t take my eyes off him.

His hair went gray. She has a great sense of humor.
Metaphor is not just about language; it’s really about thought. We conceive of things in terms of other things.
Affection is Warmth

My love for her still smolders.

They gave me a warm welcome.

He’s a warm person.

It took a while to warm up to the topic.
is
Many thanks for all the answers, which show a surprising level of unanimity! For the authoritative version, who wrote a chapter in the *Encyclopedia of Computer-Human Interaction*.

For those interested here are the answers, with each work is annotated by the year of its initial publication, the figure shows a (very) loose upper bound on the year.

First windowing system:
Engelbart's NLS [68]. Had multiple windows.
Smalltalk [81], Had multiple windows.
Interaction Design

Facilitating or instigating interactions between humans (or their agents) mediated by products

Can also signify interactions between humans and products

Interactions: mainly communication, either one-on-one, one-to-many, or many-to-many.
In the Design Process

Within Products
Metaphor in the Design Process

The problem is that problems are not fixed.
“Things are selected for attention and named in such a way as to fit the frame constructed for the situation.”

—Donald Schöen, 1979
Metaphor in the Design Process
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Tea is Chemistry
New ideas are almost always the product of juxtaposition.
An important part of the design process is selling ideas to those who will implement and fund them.
Metaphor in the Design Process

Everything one says about God is a metaphor.
—Paul Tillich

Everything one says about the computer is a metaphor.
—me
No one addresses their computer without some metaphoric mediation. Metaphor provides us with the means to understand our complex digital devices.
Metaphor in the Design Process

The Design Process is a Story
Metaphor in Products

“Friction in Scheduling and Coordinating Lives in Families:”
Friction is a Connector
Metaphor in Products

Ryukyu ALIVE: Information Space is a Galaxy
Metaphor in Products

Artifacts of the Presence Era:
Data is Geology
Without boundaries, things are difficult to comprehend and reason about.
Metaphor in Products

Moving through Space and Time
Metaphors can endow machines and inanimate objects with human-like characteristics, making them more approachable and usable.
Metaphor in Products

Introducing New Concepts to Users
Criticism
Criticism of Metaphor in Design

“Searching for a guiding metaphor is like searching for the correct steam engine to power your airplane.”

— Alan Cooper
Criticism of Metaphor in Design

- Metaphors are misleading.
- Metaphors do not scale well.
- Metaphors degrade over time.
- Metaphors are overused.

Microsoft’s BOB
Criticisms of Metaphor in Design

But...

You don’t throw away a tool because it is dangerous. You just use it more carefully.
We can’t help it.

Let users find their own metaphors?

Limited ways to change perspective.

Too powerful to ignore.
Design is about invention. Invention is the product of juxtaposition. Metaphor is about juxtaposition.

Therefore, it stands to reason that design is about metaphor.
Using Metaphor Appropriately
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Use metaphor to find the hidden characteristics of the content.

Fit the metaphor to the content, not the other way around.

Be aware of the cultural and contextual properties of metaphor.

Choose metaphors that scale appropriately.
Using Metaphor Appropriately

A Tool to Change Behavior
Using Metaphor Appropriately

*Metaphors We Live By*
by George Lakoff and Mark Johnson

*Metaphor and Thought*
edited by Andrew Ortony

“Working with Interface Metaphors”
by Thomas D. Erickson in *The Art of Human–Computer Interface Design*
Thanks.

Questions?