

# The Role of Metaphor in Interaction Design

Dan Saffer

Information Architecture Summit  
March 6, 2005

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

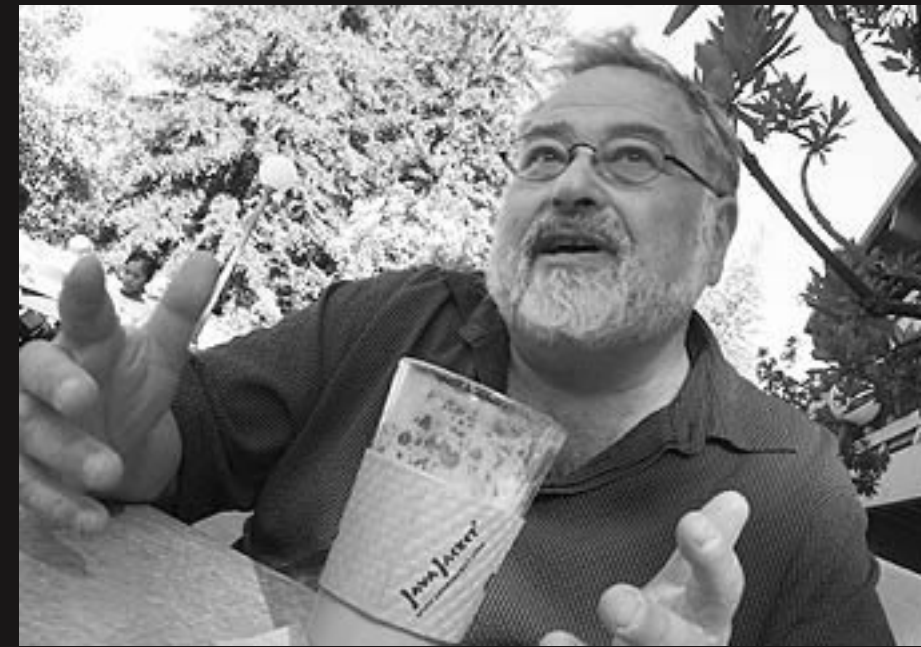
But, soft! what  
light through yonder  
window breaks?

It is the east,  
and Juliet is the sun!

—*Romeo and Juliet*, II.i



“Our conceptual system  
is fundamentally  
metaphoric 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.

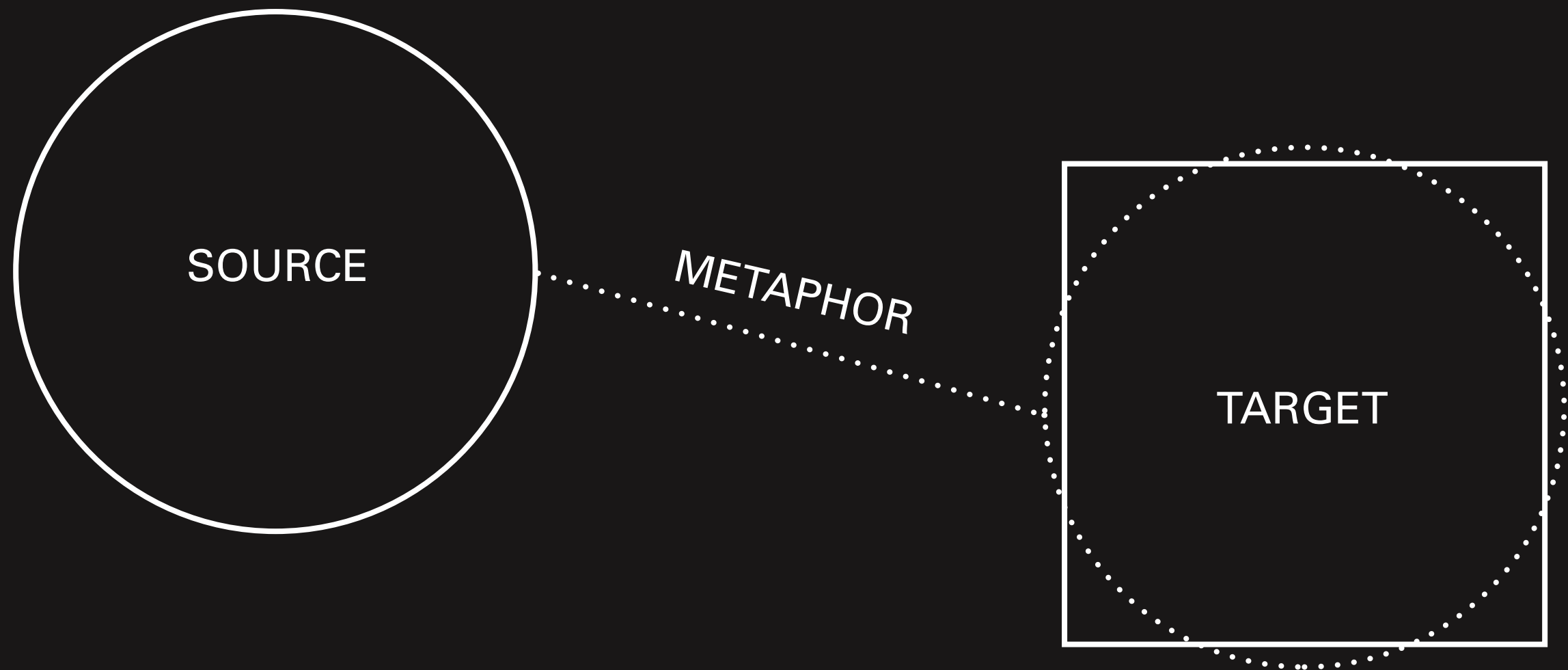
He cherishes that belief.

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.





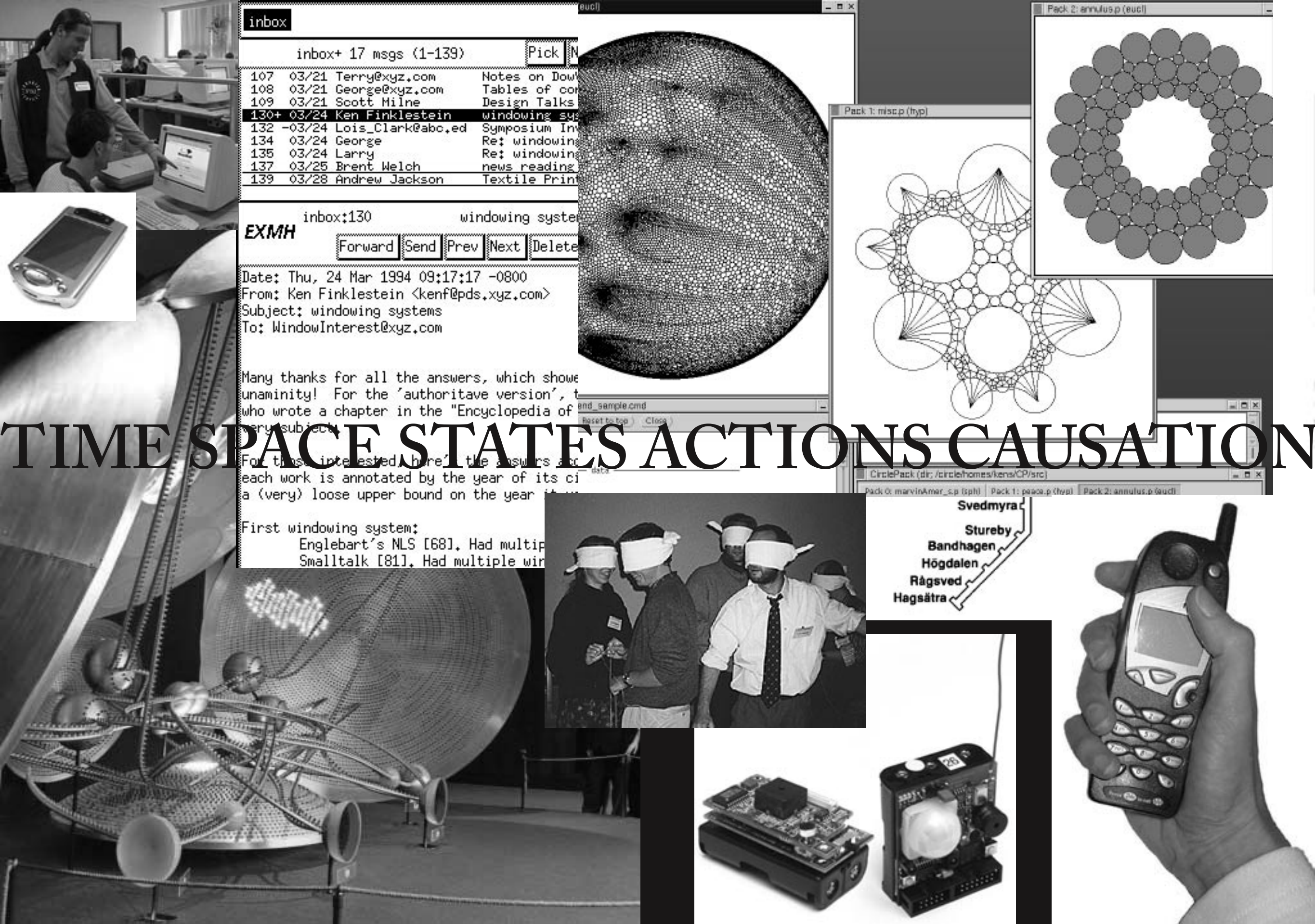
is





TIME SPACE STATES ACTIONS CAUSATION





inbox

inbox+ 17 msgs (1-139)

Pick

107	03/21	Terry@xyz.com	Notes on Dow
108	03/21	George@xyz.com	Tables of cor
109	03/21	Scott Milne	Design Talks
130+	03/24	Ken Finklestein	windowing sys
132	-03/24	Lois_Clark@abc.ed	Symposium Inv
134	03/24	George	Re: windowing
135	03/24	Larry	Re: windowing
137	03/25	Brent Welch	news reading
139	03/28	Andrew Jackson	Textile Print

inbox:130

windowing system

EXMH

Forward Send Prev Next Delete

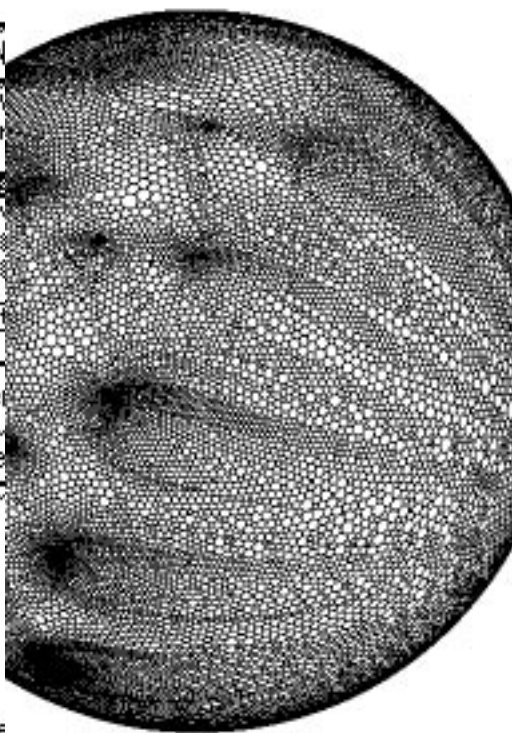
Date: Thu, 24 Mar 1994 09:17:17 -0800  
From: Ken Finklestein <kenf@pds.xyz.com>  
Subject: windowing systems  
To: WindowInterest@xyz.com

Many thanks for all the answers, which show unanimity! For the 'authoritative version', t who wrote a chapter in the "Encyclopedia of very subjects.

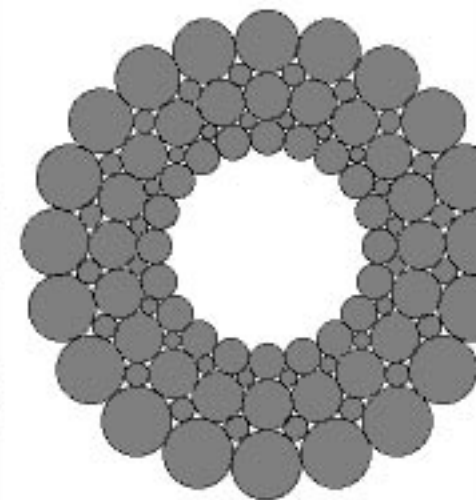
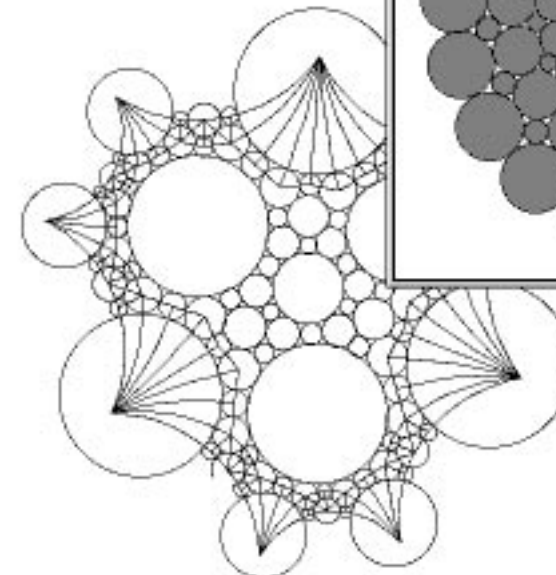
For those interested, here's the answers for each work is annotated by the year of its ci a (very) loose upper bound on the year it

First windowing system:

Englebart's NLS [68]. Had multiple windows.  
Smalltalk [81]. Had multiple windows.



Pack 1: misc.p (hyp)



CirclePack (dir: /circlehomes/kens/CP/src)

Pack 0: marvinAmar.s.p (sph) Pack 1: peaco.p (hyp) Pack 2: annulus.p (eud)

Svedmyra  
Stureby  
Bandhagen  
Högdalen  
Rågsved  
Hagsåtra







# 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



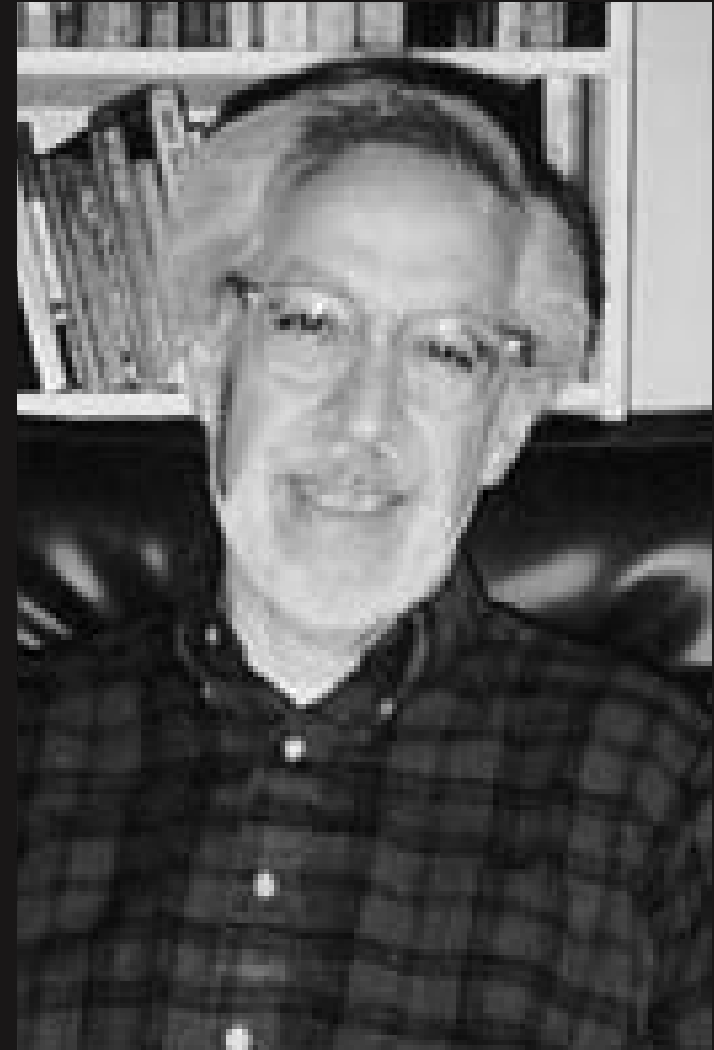


The problem  
is that problems  
are not fixed.



“Things are selected for attention and named in such a way as to fit the frame constructed for the situation.”

—Donald Schön, 1979



# Metaphor in the Design Process





# Metaphor in the Design Process

Tea is Chemistry



# Metaphor in the Design Process



New ideas are almost always the product of juxtaposition.

# Metaphor in the Design Process



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

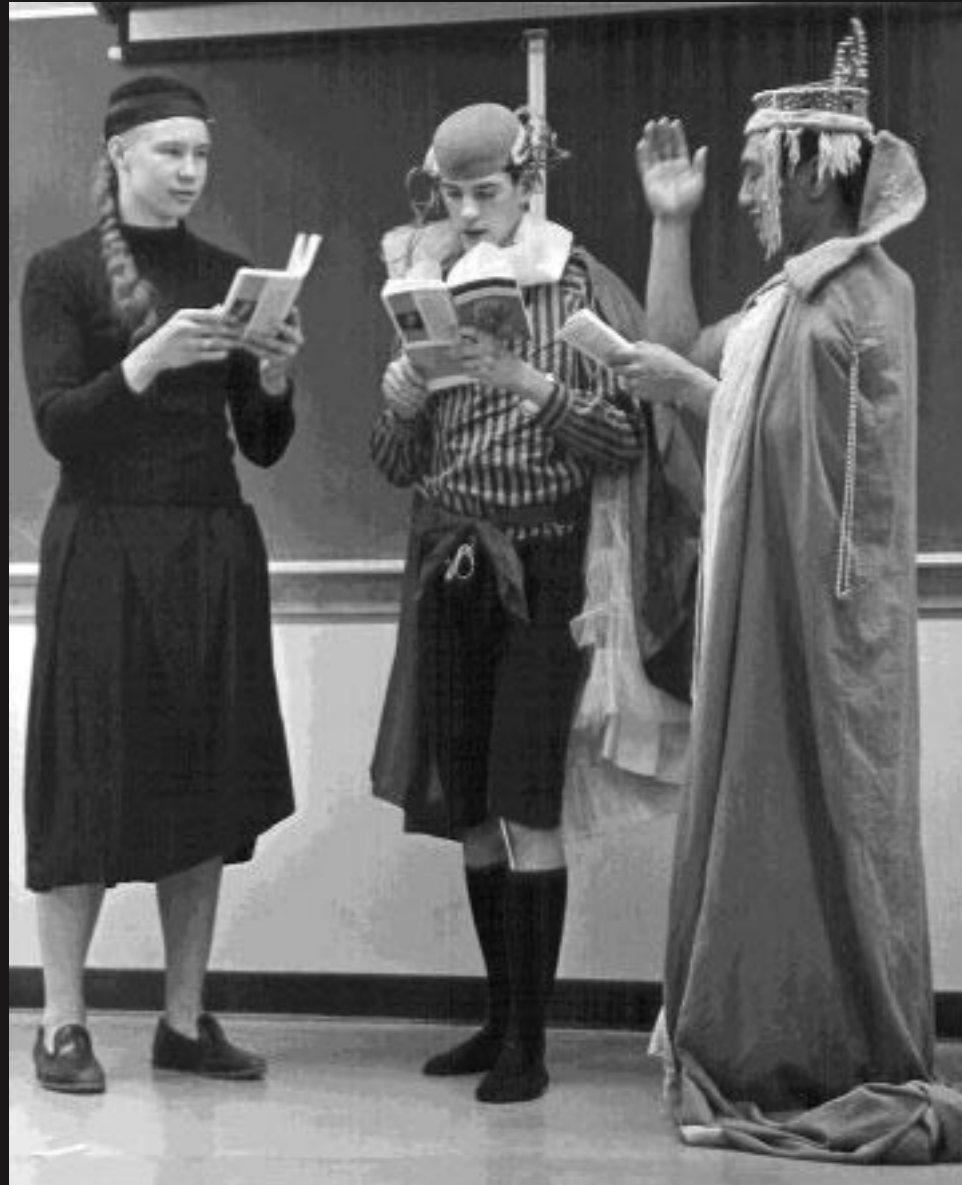


Everything one  
says about the computer  
is a metaphor.  
—me

# Metaphor in the Design Process

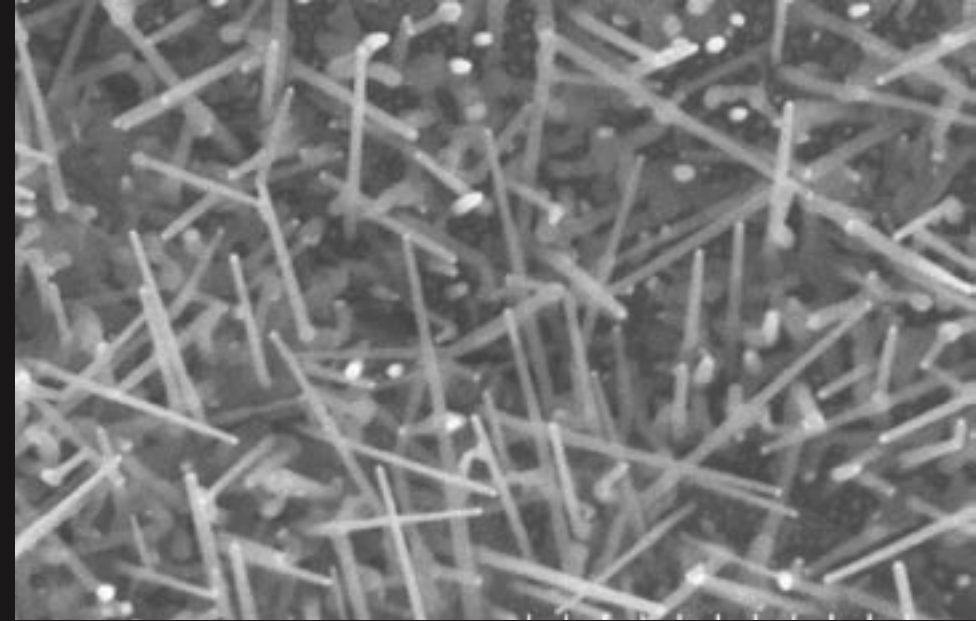


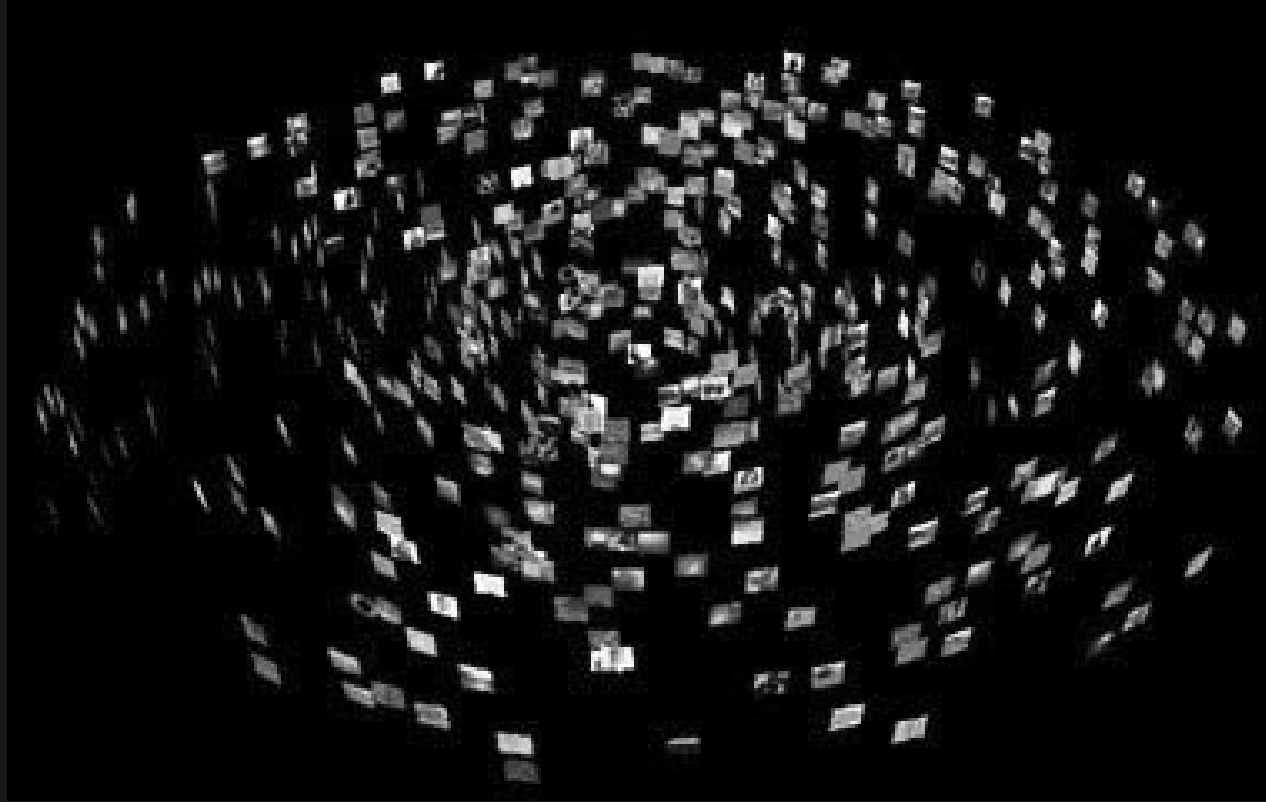
No one addresses their computer without some metaphoric mediation. Metaphor provides us with the means to understand our complex digital devices.



The Design Process  
is a Story

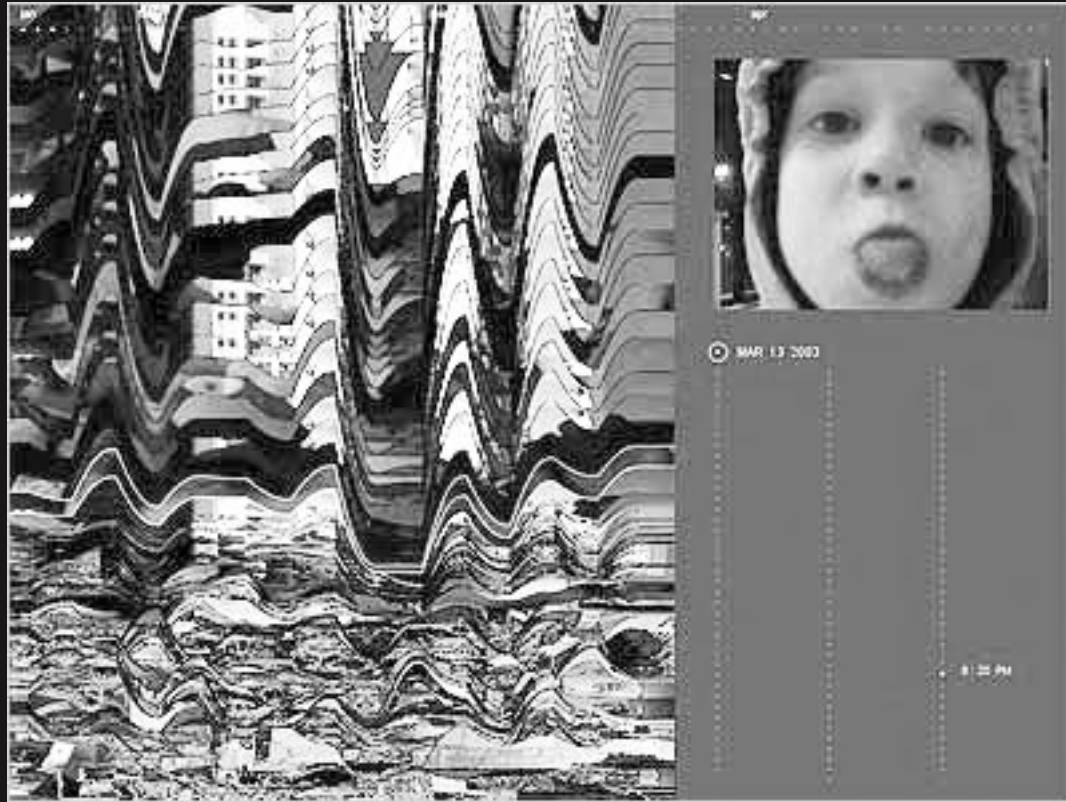
“Friction in Scheduling  
and Coordinating Lives  
in Families:”  
Friction is a Connector





Ryukyu *ALIVE*:  
Information Space  
is a Galaxy





Artifacts of the  
Presence Era:  
Data is Geology



Without boundaries,  
things are difficult  
to comprehend and  
reason about.



Moving through  
Space and Time



Metaphors can endow machines and inanimate objects with human-like characteristics, making them more approachable and usable.



# Introducing New Concepts to Users



# Criticism





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

# Criticism of Metaphor in Design



Microsoft's BOB

Metaphors are misleading.

Metaphors do not scale well.

Metaphors degrade over time.

Metaphors are overused.





But...

You don't throw away  
a tool because it is  
dangerous. You just  
use it more carefully.

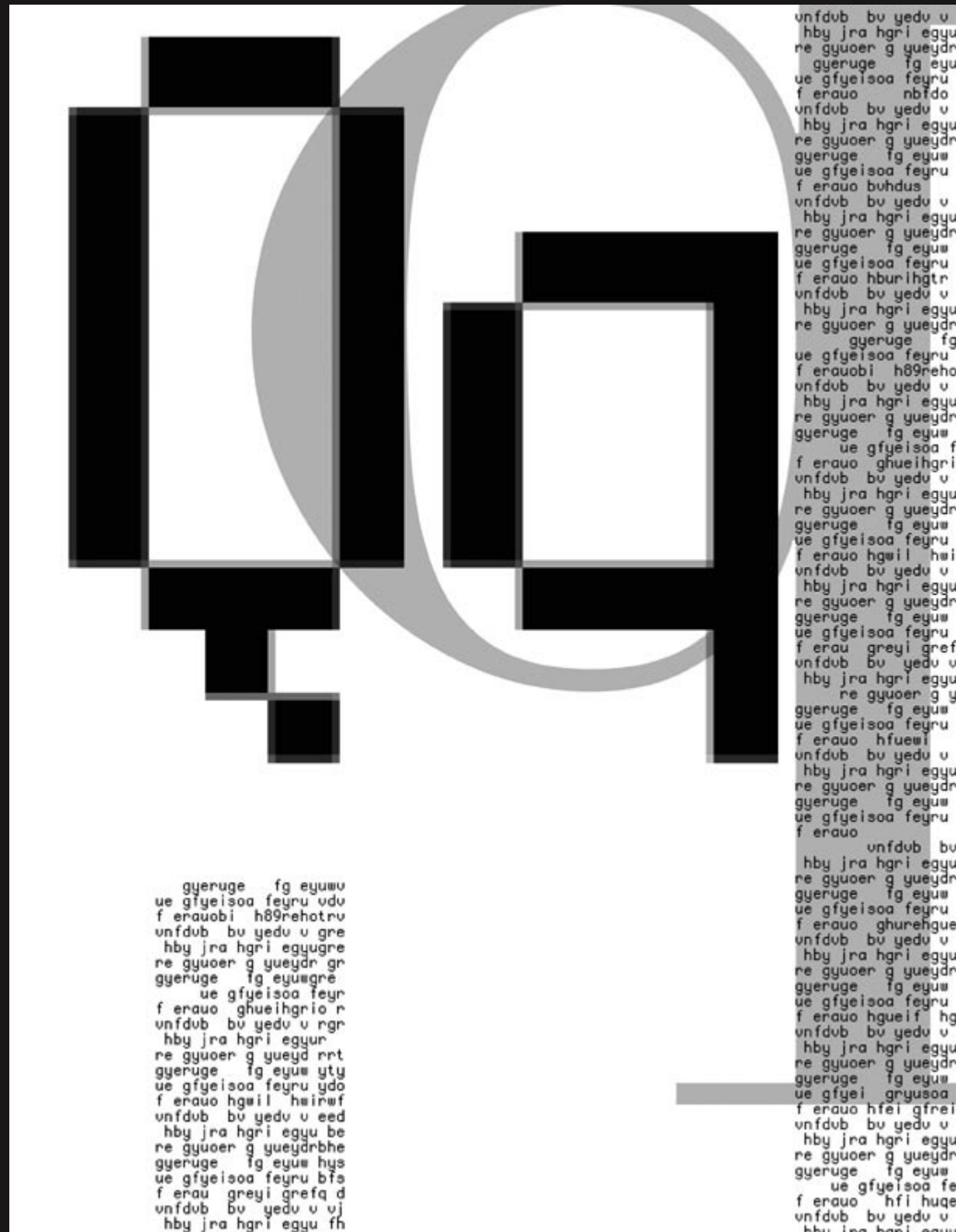


We can't help it.

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



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

*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?