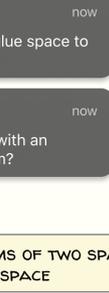


# CHAPTER 3: CONVERSATION OVER TIME

*True storytellers do not know their own story... Neither do they know anyone else's story in its entirety. The primary work of historians is... to reveal continuity where we have assumed something to be ended.*

James Carse, *Finite and Infinite Games*

WHERE DOES A MESSAGE GO AFTER YOU'VE SENT IT?



- GLUE now: As if it wasn't hard enough already to manage our linear-chat notifications
- GLUE now: now we have a multi-dimensional glue space to track changes for!
- GLUE now: how are we supposed to catch up with an excited outliner? or a group of them?

I THINK ABOUT THIS PROBLEM IN TERMS OF TWO SPACES: TREE-SPACE AND LEAF-SPACE

## TREE-SPACE

This is the space we've been working with so far.

It's active.

It shows the whole of the conversation.

from the roots...

to their offshoots...

to the offshoots of their offshoots

2 HOURS LATER

Suddenly, while you're away, there's an update!

oh, hey!

See how pink's message is marked as new? That's not the only one.

Let's climb up the tree a bit with those buttons below...

\*CLICK!

shwoop!

\*I'll make this comic interactive at some point...

This is the space we've been working with so far.

It's active.

It shows the whole of the conversation.

from the roots...

to their offshoots...

to the offshoots of their offshoots

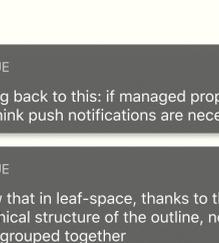
to the offshoots of their offshoots of their offshoots

3 more messages...

notice the pink glow on the side >

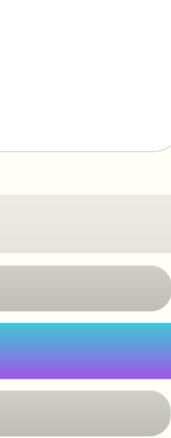
that's an ambient "read" status, telling us that Pink saw our message.

THE CLICKER IS UNIQUE TO TREE-SPACE



IT LETS US JUMP AROUND QUICKLY TO SEE WHAT'S NEW.

ASIDE: I'D ALSO LIKE TO EXPLORE MINIMAPS IN THE FUTURE TO VISUALLY REPRESENT UNREADS IN A COMPACT WAY



Observablehq's Visual Dataflow © Tucker et. al, 2020 (29)

TREE-SPACE IS SUPER HANDY WHEN YOU'RE CONVERSING IN REAL TIME OR WANT A BIRD'S EYE VIEW

BUT IT'S DENSE, AND YOU SOMETIMES WANT A MORE BRIEF DIGEST OF WHAT'S NEW IN YOUR GIANT TREE

THAT BRINGS US TO

## LEAF-SPACE

If tree-space is an outline, leaf-space is a timeline.

It's a shallow representation of our outline showing what's new with just a bit of context.

ah, I see! so this is a leaf I'm sending you.

to the offshoots of their offshoots

to the offshoots of their offshoots of their offshoots

to the off... well... I give up

phew!

who knew recursion was so exhausting?

RECALL WHAT THE SECOND GROUP OF MESSAGES LOOKED LIKE COLLAPSED IN TREE-SPACE:

to their offshoots...

to the offshoots of their offshoots

to the offshoots of their offshoots of their offshoots

3 more messages...

WHILE TREE-SPACE HAS AN ABUNDANCE OF CONTEXT, LEAF-SPACE HAS AN ABUNDANCE OF SALIENCE

I BELIEVE BOTH SPACES HAVE A PLACE IN A GLUE CHAT

- GLUE now: Jumping back to this: if managed properly, I don't think push notifications are necessarily evil
- GLUE now: We saw that in leaf-space, thanks to the hierarchical structure of the outline, notifications can be grouped together
- GLUE now: By no means is this a perfect solution to the information overload we experience on the daily, but perhaps it can be better-organized.

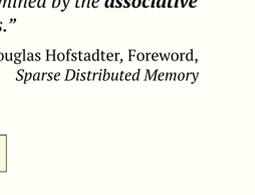
We've seen how we can glue new messages together

but what happens as these messages age?

meanings change over time

correction: they \*evolve over time.

EVERY MESSAGE WE SEND HAS ITS PLACE IN (CHAT) HISTORY



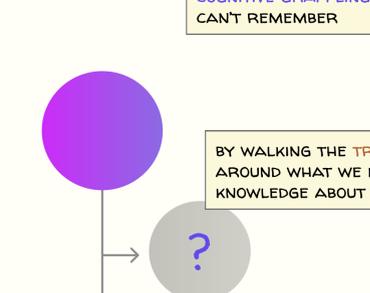
AS IT SITS THERE, IT STEEPS AND FERMENTS



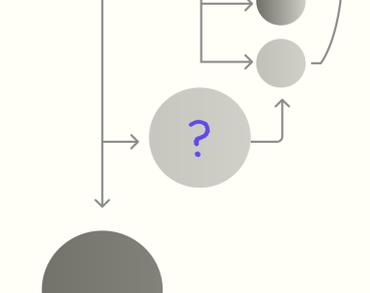
ITS MEANING SEEPING INTO THE ADJACENT MESSAGES



THE ORIGINAL MESSAGE WAS ROUGH.



BUT THE IDEA HAD A CHANCE TO EVOLVE



FROM A MESS TO AN OPUS

Manuscripts & Sheets from Beethoven's Opus 101 (30, 31)

On the web, iterative work happens through repeated presses of an edit button

edit

edit

edit

edit

but in the process, we often forget how we got there

so, what if we made edits as atomic as messages themselves?

changes -> edits accepted

discrete-like-atoms -> as atomic as messages themselves accepted

nicel!

by representing edits as messages, the process becomes a conversation in itself.

yeah! and in the process, this message:

so, what if we made changes discrete like atoms?

co-evolved with the conversation into this:

so, what if we made edits as atomic as messages themselves?

Conversation is already a writing process. Let's give it the tools it needs to thrive.

NOW, LET'S TALK ABOUT MEMORY

IF YOU RECALL, AT THE VERY BEGINNING, I SAID:

Our conversations have a memory problem

HOW DOES GLUE HELP WITH THIS?



## ASSOCIATIONS!

BY STRUCTURING OUR THOUGHTS, WE CAN FIND OLD MESSAGES THE SAME WAY OUR BRAINS REMEMBER THEM

*...conversations take random walks through events and ideas in a manner determined by the associative networks of the participants.*

Douglas Hofstadter, Foreword, *Sparse Distributed Memory*

SUPPOSE YOU'RE LOOKING FOR

BUT THE ONLY SEARCH TERMS YOU REMEMBER ARE AND :



IN AN UNSTRUCTURED CHAT LOG, FINDING WHAT YOU NEED IS A TASK IN ITSELF



BUT SINCE OUR MEMORIES ARE ASSOCIATIONAL, WE CAN USE WHAT WE REMEMBER AS COGNITIVE GRAPPLING HOOKS ONTO WHAT WE CAN'T REMEMBER



BY WALKING THE TREE NEIGHBORHOOD AROUND WHAT WE KNOW, WE ACCUMULATE KNOWLEDGE ABOUT WHAT WE DON'T



AND SOON ENOUGH, WITH GLUE SHOWING US THE WAY, WE FIND WHAT WE NEED

FOLLOWING ASSOCIATIONAL TRAILS HAS ALWAYS BEEN HOW WE REMEMBER THINGS. LET'S NOT FORGET THAT.