From Frame to Text Generation

Esther Seyffarth
September 20, 2018

WordHack @ Babycastles, NYC

The "goofing off until you have a bot idea" approach to generative art

s-t-r
@ojahnn

I want a nap; my hair has grown too long; and I want a fluffy animal pal.

In summary, I'm looking for a cot, a cut, and a cat

August 30, 2018, 2:39 PM · ⟳ 1 · ★ 8 · Go to http location

s-t-r
@ojahnn

Now I want to go scrambling up a wall, an additional month or two to do my work in, and 3 words that sound similar

August 30, 2018, 3:10 PM · ↻ 0 · ★ 2 · Go to http location

s-t-r @ojahnn   21 hours ago
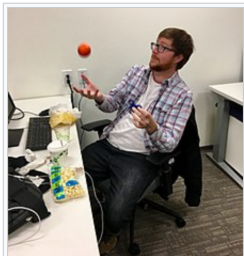a climb, a timb, a rhymb

Goofing off

From Wikipedia, the free encyclopedia

Goofing off is a slang term in the United States for engaging in recreation or an idle pastime while obligations of work or society are neglected. Common obligations neglected in the course of goofing off include schoolwork, paid employment, social courtesies and the expectations of relations. Goofing off at school is considered to be a regular behaviour, which is engaged in by all students at one time or another.[1]

When goofing off occurs within the classroom, teachers can resolve the matter quickly by direct confrontation.[2] Employers may use wage premiums to discourage goofing off by their employees, although it is suggested that the effects of such incentives causes aging to have a negative effect upon earnings sooner than would be otherwise expected.[3] Goofing off has been shown to improve work or study in the right environments, and can relieve stress.[4][5] It may be a form of creativity and experimentation, providing useful learning experiences and discoveries.[6]

A man goofing off at work, playing with a fidget spinner and a ball

Some research has indicated that women tend to feel more guilt than men about taking time for themselves and so use breaks to become more organized.[7]

Perhaps the most famous example of goofing off is the tale reported by Suetonius of Nero fiddling while Rome burned.[8][9]

Let's Make a Bot!

Check out my band! @check_out_my_band@botsin.space   Sep 3

Hey, do you want to see my band play on Friday?

Guess what we're called!

There are two things we love: to travel from one point to another without physically crossing the distance between the two points, and to arrange into some order, especially numerically, alphabetically or chronologically. We are...

SHOW MORE

TELEPORT & SORT

↩ 0   ⟲   ★

- Check out the bot at
 **https://botsin.space/@check_out_my_band**!

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  - **Have you read Jane Austen's latest hit?**

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  - **Have you read Jane Austen's latest hit?**
  - **I'm teaching a new class next year!**

Some Linguistic Theory:
Frame Semantics
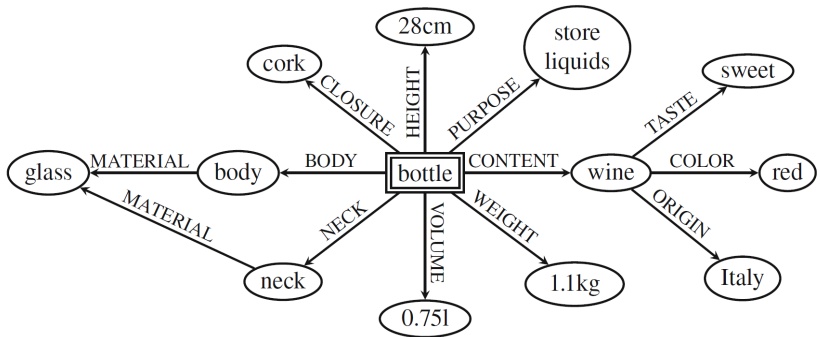
L. Barsalou (1992): Frames, Concepts, and Conceptual Fields

Image from Gamerschlag et al. (2014): Frames and Concept Types
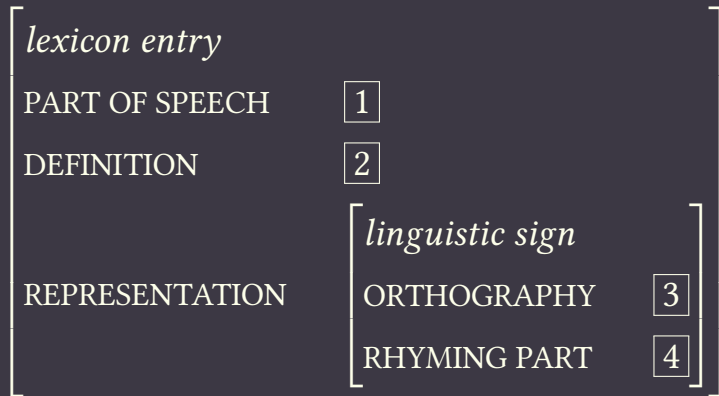
Bottle of Italian Red Wine

$$
\begin{bmatrix}
\textit{bottle} \\
\text{PURPOSE} \quad \text{store liquids} \\
\text{WEIGHT} \quad \text{1.1kg} \\
\text{CONTENT} \quad
\begin{bmatrix}
\textit{wine} \\
\text{TASTE} \quad \text{sweet} \\
\text{COLOR} \quad \text{red} \\
\text{ORIGIN} \quad \text{Italy}
\end{bmatrix} \\
\dots \qquad \dots
\end{bmatrix}
$$

Q: So... it's basically, like, Object Orientation, but for *everything*?

Q: So… it's basically, like, Object Orientation, but for *everything*?

A: Yes.

A Frame for a Word

$$
\begin{bmatrix}
\textit{lexicon entry} \\
\text{PART OF SPEECH} & \boxed{1} \\
\text{DEFINITION} & \boxed{2} \\
\\
\text{REPRESENTATION} &
\begin{bmatrix}
\textit{linguistic sign} \\
\text{ORTHOGRAPHY} & \boxed{3} \\
\text{RHYMING PART} & \boxed{4}
\end{bmatrix}
\end{bmatrix}
$$
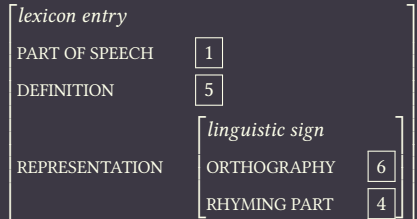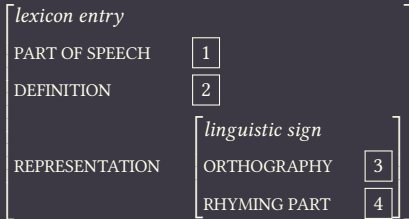
Two Frames for Two Words
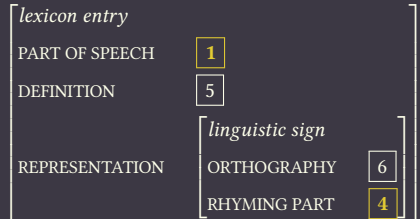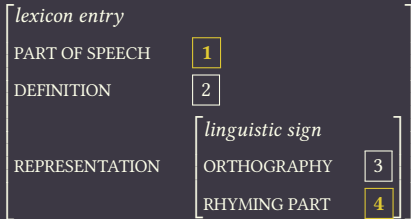
Filling in Values

$$
\begin{bmatrix}
\textit{lex. entry} & \\
\text{POS} & \textbf{V} \\
\text{DEF} & \text{to travel from one point...} \\
\text{REPR} & \begin{bmatrix} \textit{linguistic sign} & \\ \text{ORTHO} & \text{teleport} \\ \text{RHYMING} & \textbf{AO R T} \end{bmatrix}
\end{bmatrix}
\qquad
\begin{bmatrix}
\textit{lex. entry} & \\
\text{POS} & \textbf{V} \\
\text{DEF} & \text{to arrange into some order...} \\
\text{REPR} & \begin{bmatrix} \textit{linguistic sign} & \\ \text{ORTH} & \text{sort} \\ \text{RHYMING} & \textbf{AO R T} \end{bmatrix}
\end{bmatrix}
$$

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SHOW MORE

TELEPORT & SORT

↩ 0   ⇄   ★

Filling in Values

$$
\begin{bmatrix}
\textit{lex. entry} & \\
\text{POS} & \textbf{N} \\
\text{DEF} & \text{the state of being unified} \\
\text{REPR} & \begin{bmatrix}
\textit{linguistic sign} & \\
\text{ORTHO} & \text{unification} \\
\text{RHYMING} & \textbf{EY SH AH N}
\end{bmatrix}
\end{bmatrix}
\qquad
\begin{bmatrix}
\textit{lex. entry} & \\
\text{POS} & \textbf{N} \\
\text{DEF} & \text{the act or process of irrigating} \\
\text{REPR} & \begin{bmatrix}
\textit{linguistic sign} & \\
\text{ORTH} & \text{irrigation} \\
\text{RHYMING} & \textbf{EY SH AH N}
\end{bmatrix}
\end{bmatrix}
$$

Check out my band! @check_out_my_band@botsin.space   Aug 31

Hey, to you want to see my band play on Friday? Guess what we're called! We wanted a name that conveyed our deep love for our favorite things in the world: the state of being unified, and the act or process of irrigating, or the state of being irrigated. We're called... SHOW MORE

UNIFICATION & IRRIGATION

↩ 0   ⇄   ★

Take-Home Messages

Summary

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- Running the bot is now a **logical constraint-solving task**: Identify entities A and B, such that A and B share a value for their attribute /REPR/RHYMING.

I invite you to think about your own creative projects in a *frame-y* way: It helps you understand how entities relate to each other.

Thank you! Say hi or find me online if you want to chat!

More info…

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- Concepts have a **type** (e.g. *bottle*, *wine*, etc.)

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- We can indicate that two values are identical using **coindexation**.

- There is no single correct architecture; it **depends** on what you want to achieve.

Tomorrow, I'm giving a talk at the NLP Reading Group at CUNY: ***From Text to Frame Generation*** – find the slides on my website if you're interested in a more linguistic perspective!