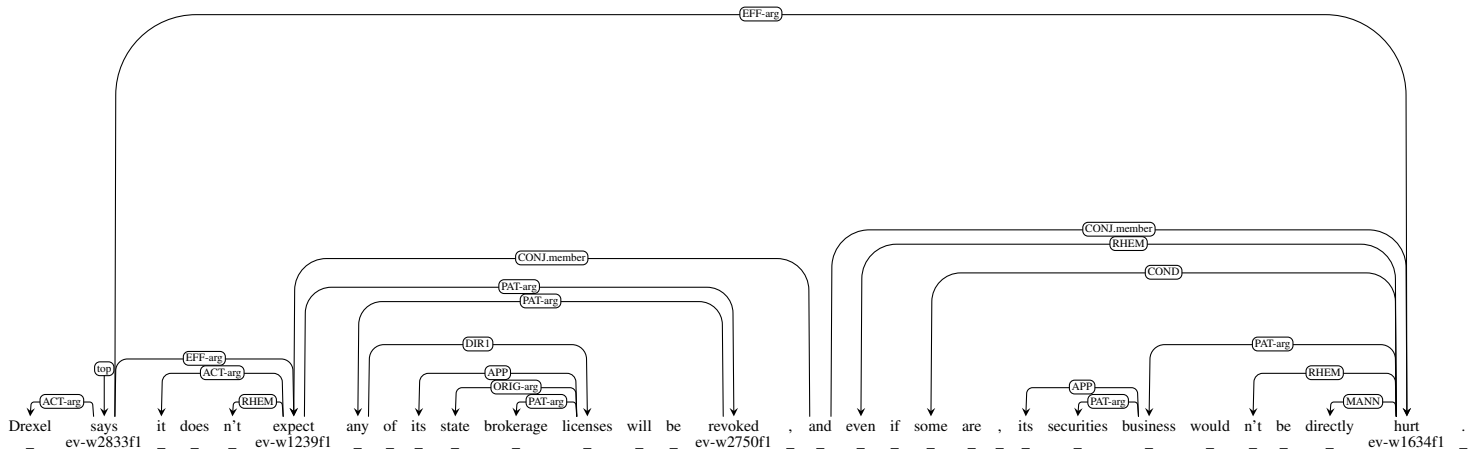
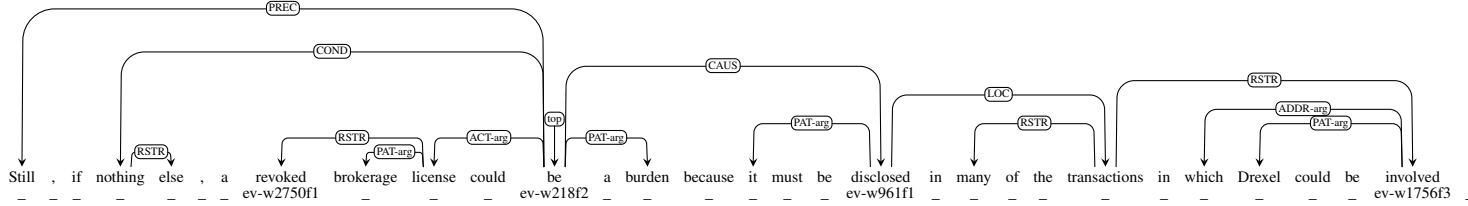


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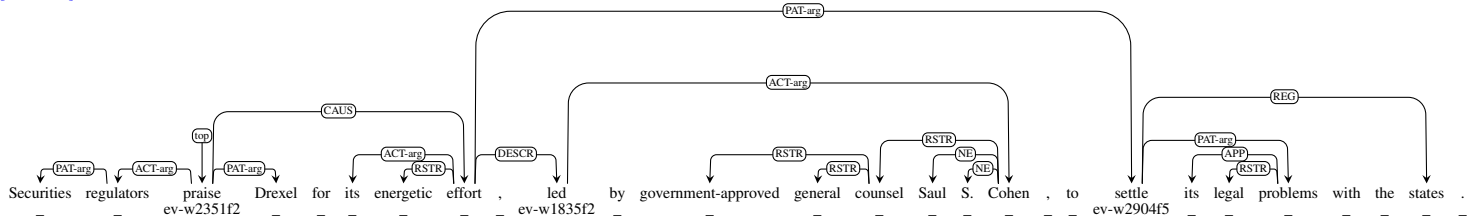




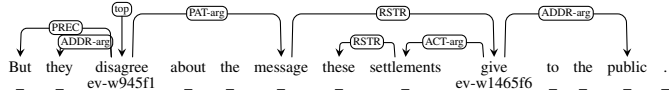
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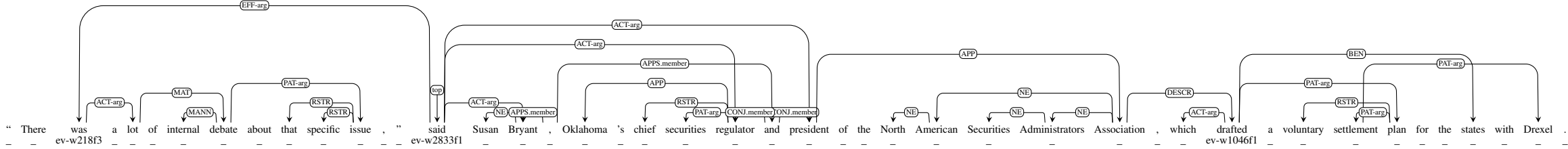
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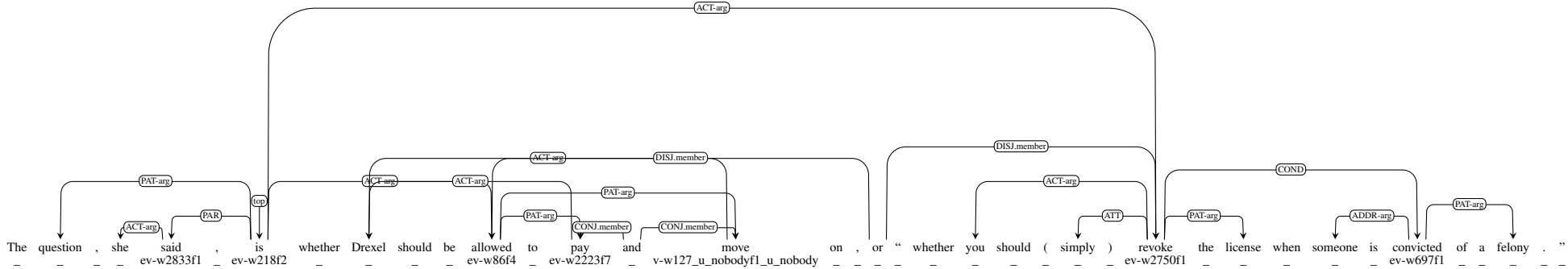
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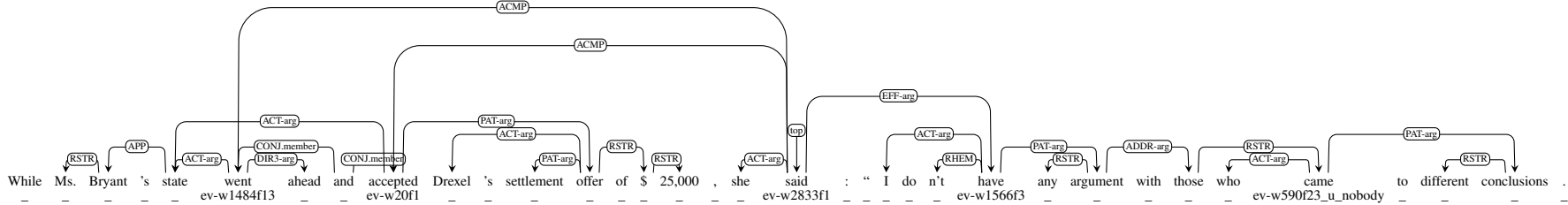
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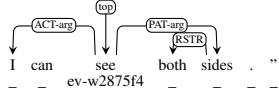
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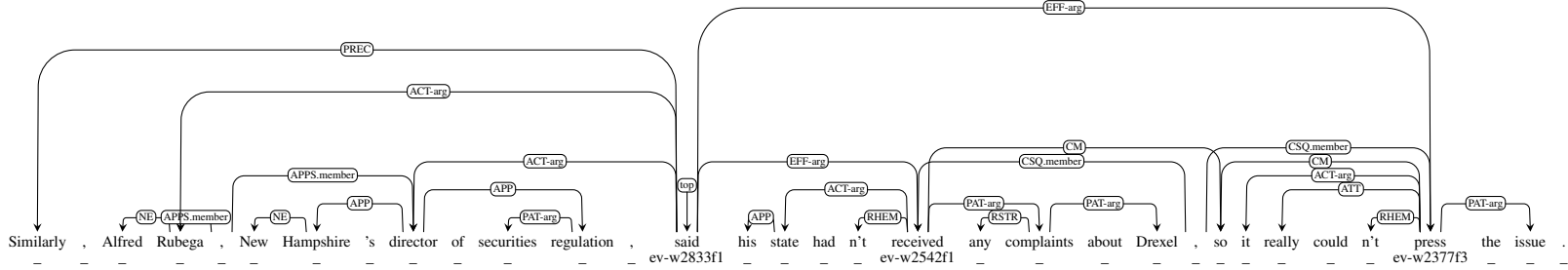
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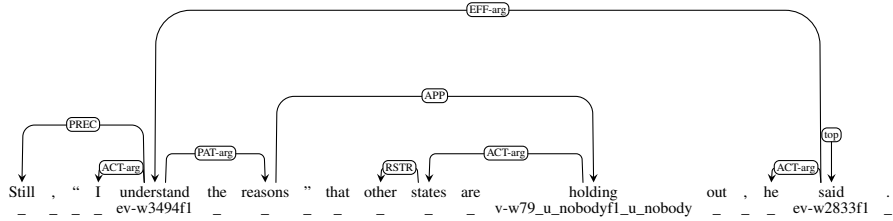
[21296020]



[21296021]



[21296022]



[21296023]



Figure 1. A diagram illustrating the proposed neural network architecture for word embedding generation. The input sequence is "It is one of the states that have met with Mr. Cohen and asked for additional information about investors' accounts and other matters." The words are mapped to vectors in a 3D space. The architecture consists of three layers: an input layer, a hidden layer, and an output layer. The input layer uses a combination of word embeddings (e.g., ACT_{arg} , PAT_{arg} , THI) and a context vector ($ev-w218f2$). The hidden layer uses a combination of word embeddings (e.g., ACT_{arg} , PAT_{arg} , THI , $CONJ_{member}$, ADJ_{arg} , $CONJ_{member}$, ADJ_{arg} , PAT_{arg}) and a context vector ($ev-w1964f3$). The output layer uses a combination of word embeddings (e.g., ACT_{arg} , PAT_{arg} , THI , $CONJ_{member}$, ADJ_{arg} , $CONJ_{member}$, ADJ_{arg} , PAT_{arg}) and a context vector ($ev-w141f1$). The diagram shows the flow of information from the input layer through the hidden layer to the output layer, with various word embeddings and context vectors being used to generate the final output.

[21296039]

Figure 10: A sentence with a long-distance dependency. The sentence is: "This particular issue goes to the very integrity of the capital-formation market." state Banking Commissioner Howard Brown said. The dependency is between the word "said" and the word "issue". The dependency is labeled as "EPP-_{am}". The sentence is annotated with various grammatical tags: "This" (DT), "particular" (JJ), "issue" (NN), "goes" (VBZ), "to" (TO), "the" (DT), "very" (RB), "integrity" (NN), "of" (IN), "the" (DT), "capital-formation" (NN), "market" (NN), "state" (NN), "Banking" (NN), "Commissioner" (NN), "Howard" (NN), "Brown" (NN), "said" (VBD). The dependency is represented by a curved arrow from "said" to "issue".

[21296040]

A banking department spokesman added ev-w45f3 : " Commissioner Brown does n't feel ev-w1298f1 that money alone is ev-w218f2 the issue here . "

[21296041]

The diagram illustrates the syntactic structure of the sentence: "Particularly touchy are ev-w1818f2 the cases of New York, which, based on the base of Drexel's base, and California, the base of Drexel's highly profitable junk-bond operation that led to the firm's legal difficulties".

The sentence is analyzed into several syntactic components:

- Particularly touchy are ev-w1818f2**: This phrase is connected to the **PAT** (Predicate) node.
- the cases of New York, which, based on the base of Drexel's base, and California, the base of Drexel's highly profitable junk-bond operation that led to the firm's legal difficulties**: This phrase is connected to the **CNJ** (Conjunction) node.
- the cases of New York**: This phrase is connected to the **APP** (Appositive) node.
- which, based on the base of Drexel's base**: This phrase is connected to the **APP** (Appositive) node.
- and California, the base of Drexel's highly profitable junk-bond operation that led to the firm's legal difficulties**: This phrase is connected to the **APP** (Appositive) node.

The diagram shows the hierarchical structure of the sentence, with the main clause being "Particularly touchy are ev-w1818f2" and the subordinate clause being "the cases of New York, which, based on the base of Drexel's base, and California, the base of Drexel's highly profitable junk-bond operation that led to the firm's legal difficulties".

[21296042]

Neither state has settled ^{top} and officials in the two states wo n't discuss ^{CONJ member} their reasons ^{ACT arg} for not doing so .

[21296043]

Figure 1 illustrates a dependency parse tree for the sentence: "But Dresel has made it clear it could mount a significant legal battle in each state if its license is revoked according to state officials". The tree structure shows hierarchical groupings of words into phrases. The root node is CR1, which branches into COND and CR2. COND branches into LOC, which then branches into LOC, ESTR, and ESTR. The final branches lead to various nodes like PRIC, PAT, CPHR, ACT, and APD, which then lead to the words in the sentence.

[21296044]

[21296045]

[1250047]

Still, she said Drexel's trouble with some states is n't a bad thing

ev-w2833fi

ev-w218f2

[21296046]

“ This process should point out that it 's not going to be ev-w218f2 easy for a firm that 's convicted of a felony to immediately jump back into the retail business . ” Ms. Bryant said ev-w2833f1

[21296047]

Figure 1. A sentence with a complex structure. The sentence is: "We need to have somebody worried so they do n't do this again." The sentence is analyzed into a hierarchical structure. The root node is **SENT**, which branches into **ACT_arg**, **PAT_arg**, **ACT_arg**, and **TWHEN**. The first **ACT_arg** branches into **ACT_arg** and **PAT_arg**. The second **ACT_arg** branches into **PAT_arg** and **PAT_arg**. The **TWHEN** node branches into **PAT_arg**. The sentence is segmented into tokens: " We need to have somebody worried so they do n't do this again . "