

# Fine-grained Opinion Mining with an End-to-end Neural Model



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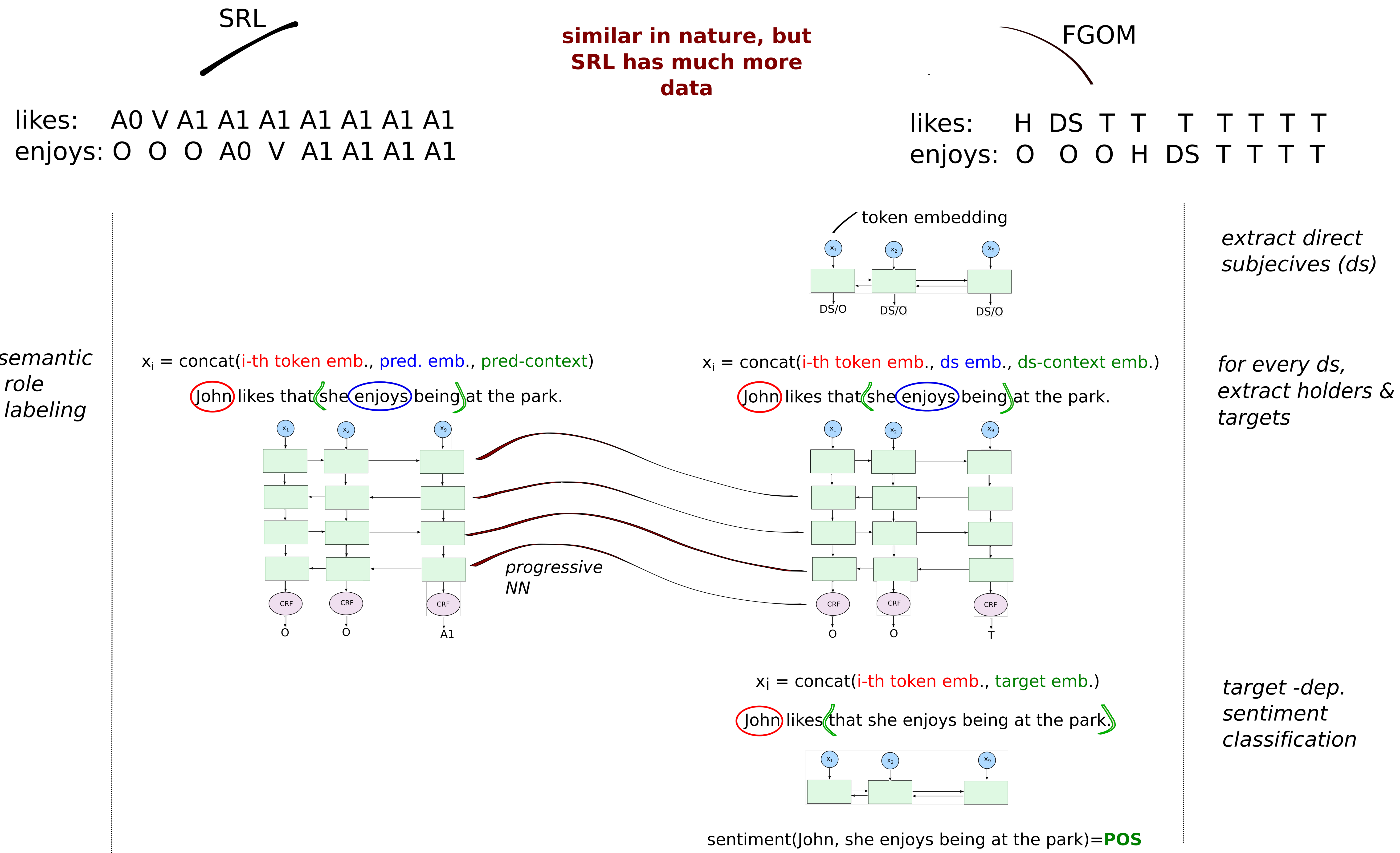
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Fine-grained opinion mining

Fine-grained opinion mining aims to detect explicit opinion expressions and their sentiment, identify targets (entities or propositions at which the sentiment is directed), holders (entities that express the opinion) and relations among extracted entities.

Multi-task learning with semantic role labeling (SRL)

John likes that she enjoys being at the park.



Future work

- ▶ finish evaluation of the proposed model :)
- ▶ resolve noise in MPQA (benchmark dataset)  
He said that signing the protocol will have a positive outcome.
- ▶ sentiment inference  
People are relieved that the reform will resolve this problem.  
agent bf event, positive  
theme  
pos(people,resolve) & agent(resolve,reform) ⇒ pos(people,reform)  
pos(people,resolve) & -effect(resolve) & theme(resolve,problem) ⇒ neg(people,problem)
- ▶ propositional anaphora resolution  
The cost got unacceptably high. People are relieved that the reform will resolve this problem.

Preliminary results

SRL	ds ext.	all roles ext.	sentiment class.	joint	f1 @ ds	f1 @ holder	f1 @ target	f1 @ sentiment
	✓					-	-	-
		✓						-
	✓	✓		✓				-
	✓	✓	✓	✓				
✓	✓	✓	✓	✓				