

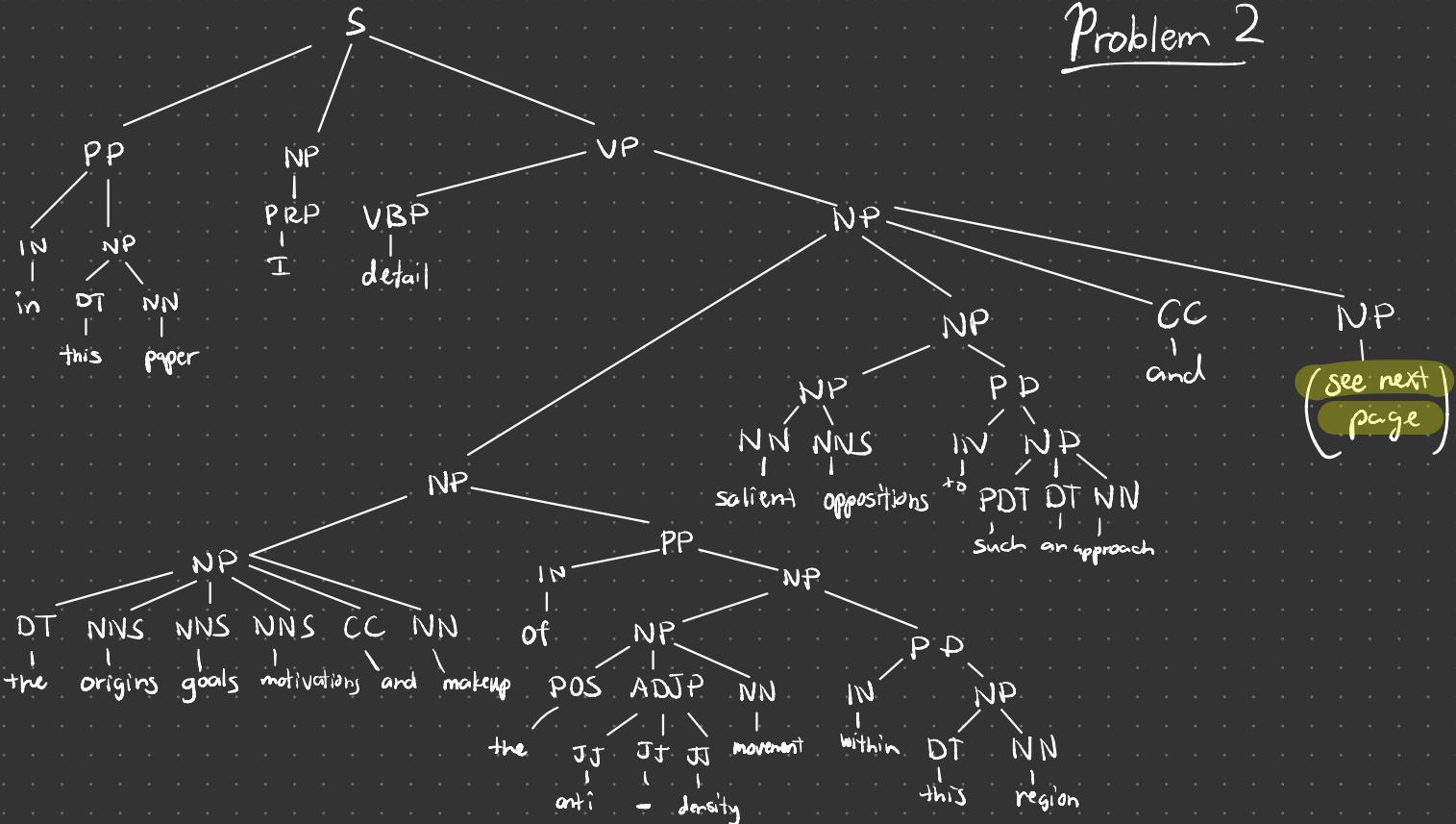
Problem 1

Sentence!

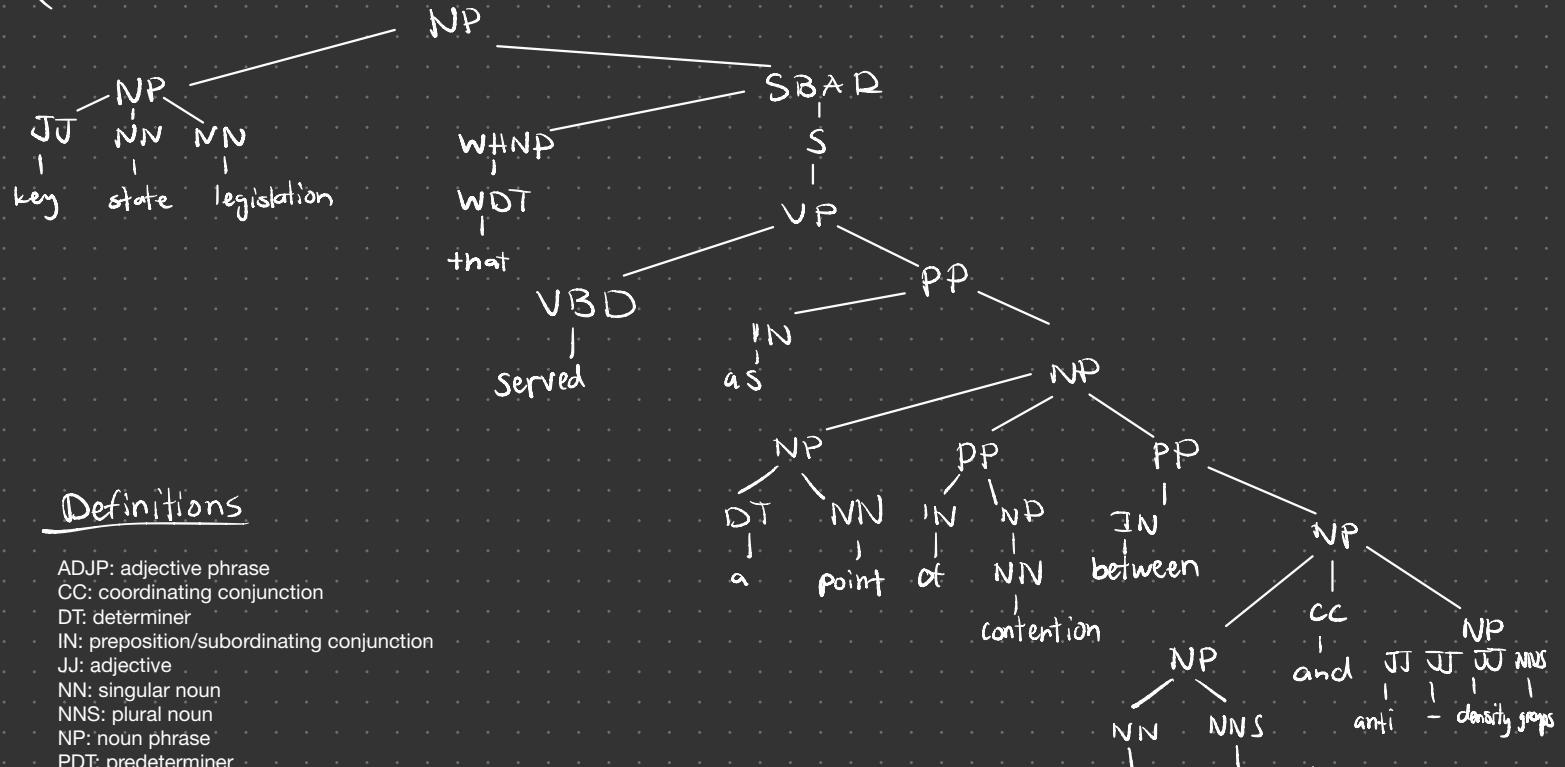
In this paper, I detail the origins, goals, motivations, and makeup of the anti-density movement within this region, salient oppositions to such an approach, and key state legislation that served as a point of contention between housing advocates and anti-density groups. In this paper, I detail the origins, goals, motivations, and makeup of the anti-density movement within this region, salient oppositions to such an approach, and key state legislation that served as a point of contention between housing advocates and anti-density groups.

41 words!

Problem 2

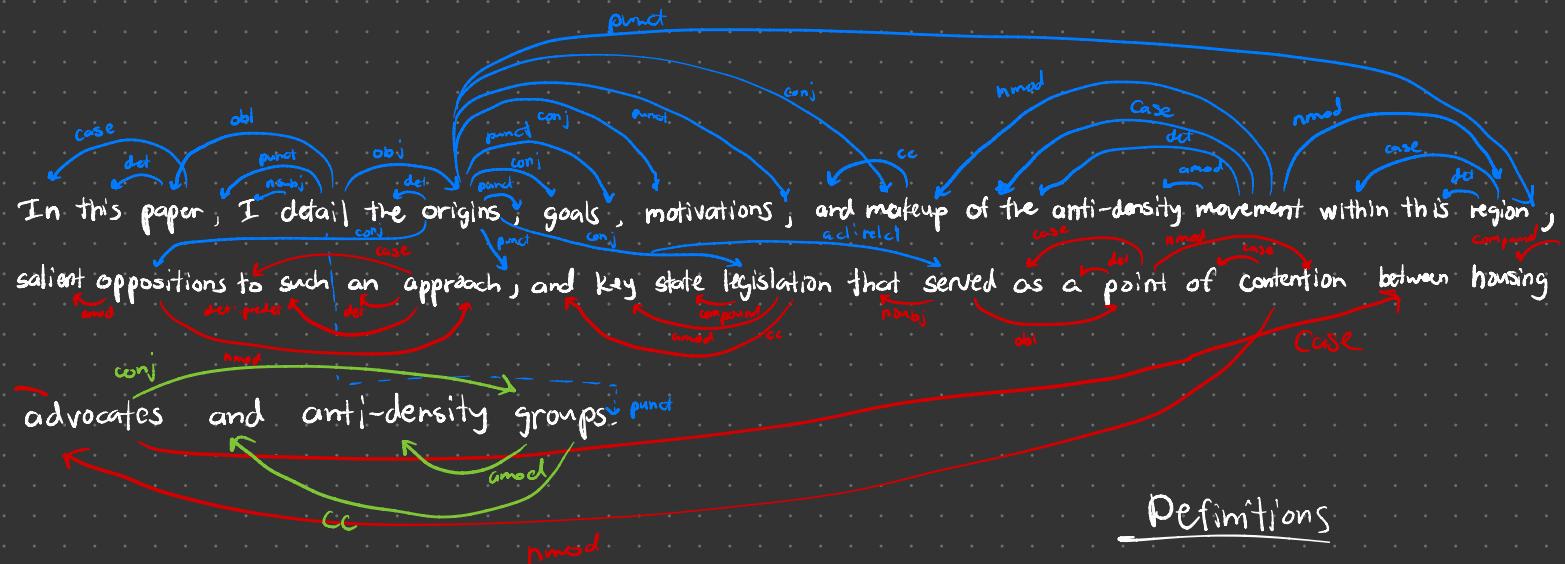


(continued)



Definitions

Problem 3



Definitions

- amod: adjectival modifier (modifies noun phrase)
- cc: coordination (relation between conjunct and the conjunction)
- det: determiner (relation between head of noun phrase and its determiner)
- punct: punctuation
- nsbj: nominal subject (noun phrase which is the syntactic object of the clause)
- obj: object of the sentence
- conj: conjunct (relation between two elements connected by a coordinating conjunction)
- acl:relcl: adnominal relative clause modifier
- case: case marker (preposition used for the clausal subject in a passive construction)
- compound: compound word

Problem 4

Verb 1: "detail"

Arguments:

0. "I" - agent of the verb

1. "the origins, goals, motivations, -- anti-density groups"
 └ passive actor

Modifiers:

LOC: Location - "In this paper" - where this is being done

Verb 2: "served"

Arguments:

0. "key state legislation" - agent of verb

1. "as a point of contention between -- groups"
 └ passive actor

→ has reference "that" word

Modifiers:

none

Problem 5

Each parse type provides unique aspects of the sentence that the others may not provide. However, based on my observations, I identified some key usecases and advantages/disadvantages that I would like to share.

With the PSG parse type, we were able to break down the sentence into a very granular hierarchy that can be used by say, a classical NLP parser to process the sentence. The issue with the PSG type is that it may be too granular for most applications, and that parse trees tend to be massive for complex sentences. For example, the parse tree for the sentence I used for this assignment was extremely long.

With the dependency parse type, we were able to get a higher level overview of the role of each word in the sentence. This technique is moderately granular, which I appreciate, but unfortunately generates a lot of output if you use a list within the sentence (punct, conj repeatedly).

The highest-level parse type was the SRL parse, providing us simply the verbs, their arguments, and their modifiers. I really appreciated how it was able to categorize the agent of the verb and who the verb was acting upon. I feel like in most cases, this information is sufficient for NLP tasks such as developing a chatbot. The weakness of this approach is that it also seems to extract too little—if you wanted to analyze, say, the syntactical structure of the sentence, you couldn't really be able to do that with the information this parse gives you.