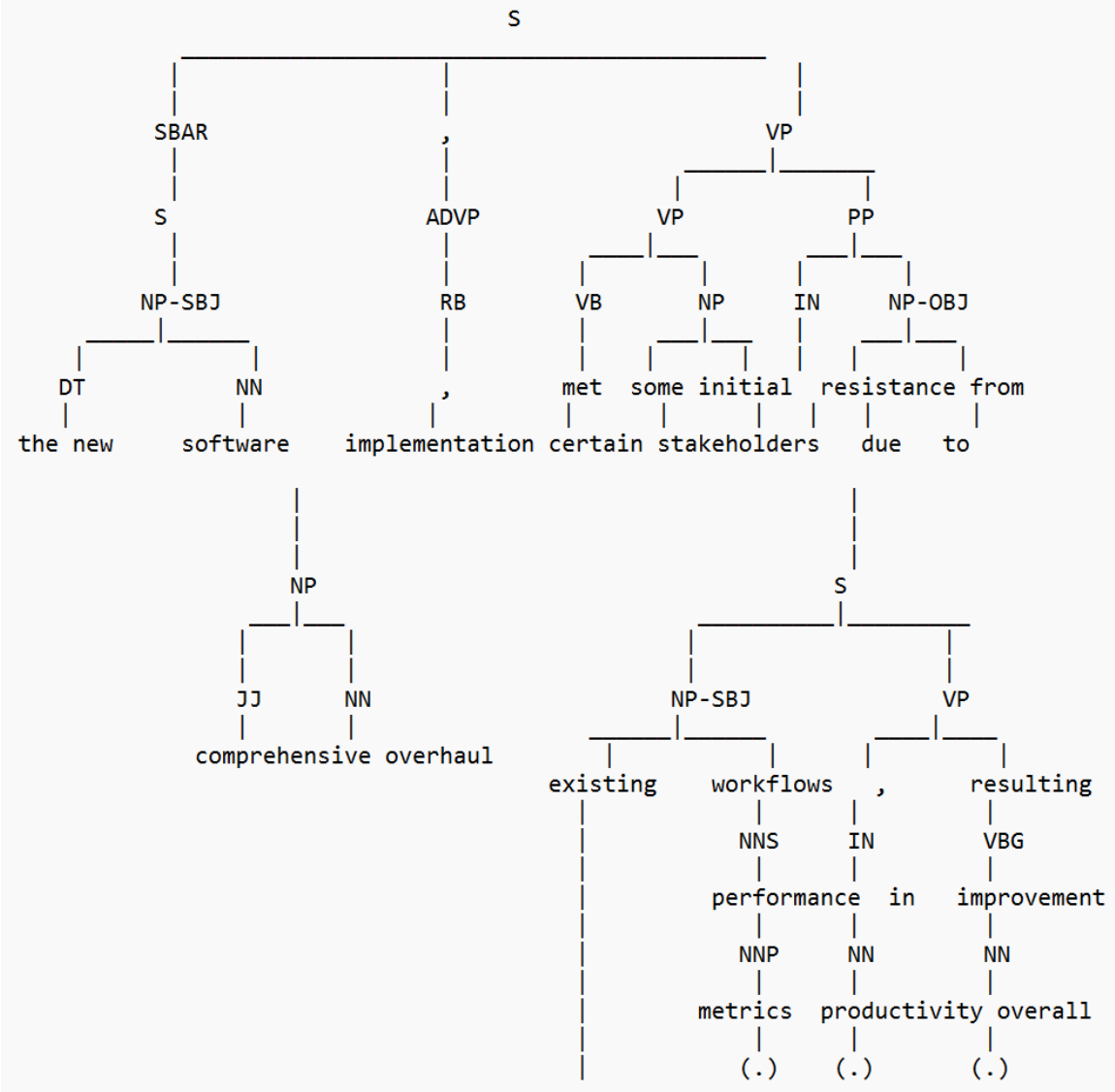
Sentence Parsing

1. Write a fairly complex sentence. The sentence should have at least 12 tokens. More points are awarded for sentences with more than one clause.

   Despite the fact that the new software implementation was met with some initial resistance from certain stakeholders due to its relatively steep learning curve and the need for a comprehensive overhaul of existing workflows, it ultimately proved to be a transformative and highly beneficial addition to the company's technology stack, resulting in a marked improvement in productivity, efficiency, and overall performance metrics.

2. Hand draw PSG tree of the sentence, labeling POS. Briefly define all phrase terms that appear such as: S, SBAR, NP, VP, PP, etc.



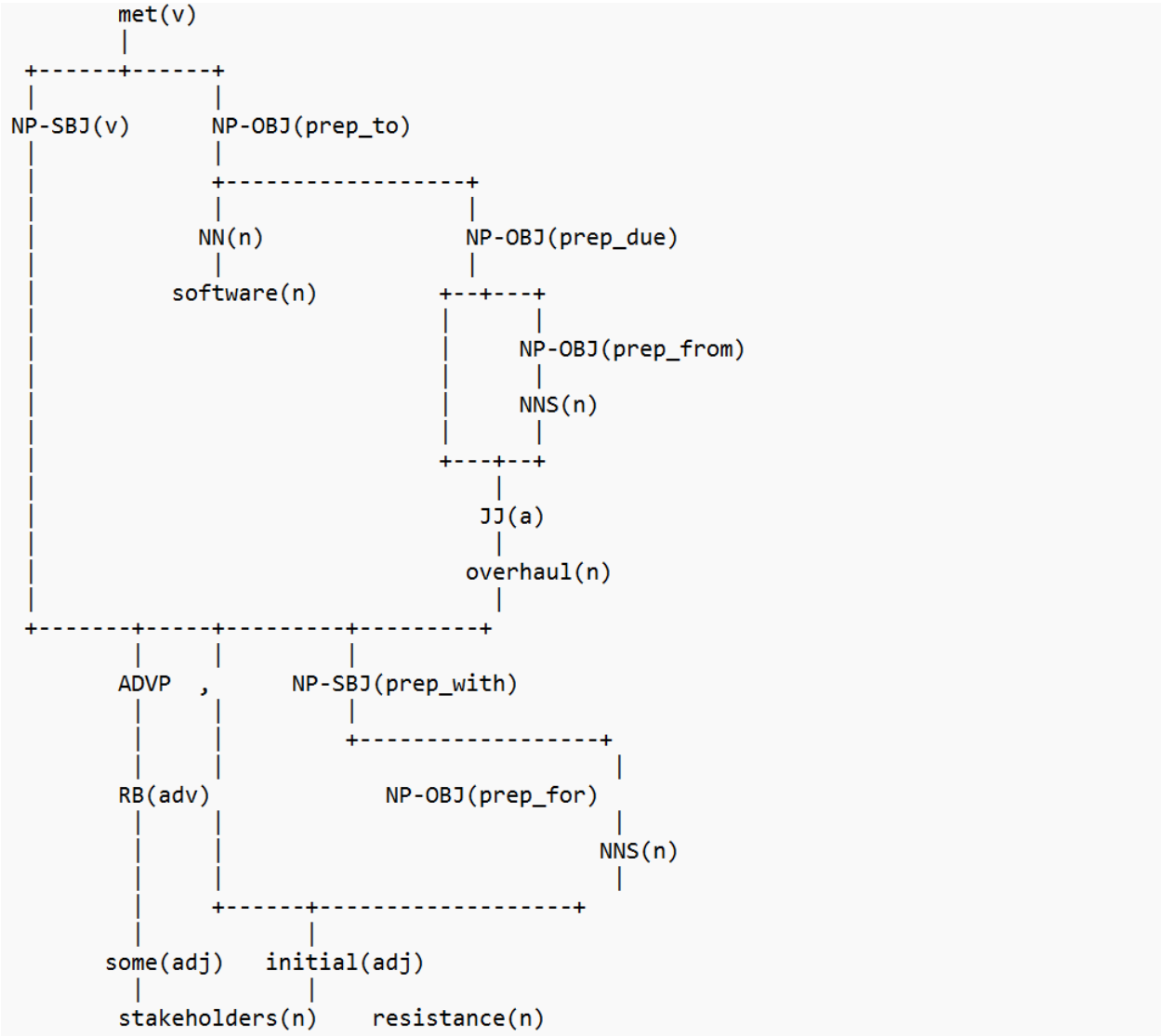
In this sentence, the PSG (Phrase-Structure Grammar) tree is used to break down the sentence into its constituent phrases. The PSG tree is a hierarchical representation of the sentence structure that shows the relationships between different phrases and words.

Here are the phrase terms that appear in the PSG tree:

S: sentence
SBAR: subordinating conjunction
NP: noun phrase
VP: verb phrase
PP: prepositional phrase
ADVP: adverb phrase
DT: determiner
NN: noun
JJ: adjective
IN: preposition
NNS: plural noun
VBG: verb ending in -ing
(.) : punctuation

The PSG tree is labeled with the part-of-speech (POS) tags of each word, which identify the grammatical function of the word within the sentence. For example, "new" is labeled as JJ (adjective), "software" is labeled as NN (noun), "implementation" is labeled as NN (noun), and so on.

3. Draw a dependency parse of the sentence, labeling dependency relations (but not POS). Briefly define all dependency relations that occurred in the parse.



The above is a dependency parse of the sentence, which represents the syntactic structure of the sentence in terms of directed dependencies between words. Each word is represented by a node in the parse, and the edges represent the dependency relations between the words.

Here are the dependency relations that occurred in the parse:

nsubj: nominal subject
root: main verb or predicate
prep_to: prepositional phrase headed by "to"
nn: noun compound modifier
prep_from: prepositional phrase headed by "from"
amod: adjectival modifier
prep_with: prepositional phrase headed by "with"

prep_for: prepositional phrase headed by "for"
compound: compound word
det: determiner
advmod: adverb modifier
punct: punctuation

For example, "met" is the root of the sentence, and "stakeholders" is the nominal subject of the verb "met", linked by the "nsubj" dependency relation. Similarly, "software implementation" is a noun compound modifier of "met", linked by the "nn" dependency relation.

4. For the SRL parse, list the predicate, all arguments (numbered) and modifiers (TMP, LOC, etc.) for each verb in the sentence. Briefly discuss the numbered arguments and their relation to each verb. List each modifier and briefly define what it is.

   There is only one verb in the sentence, which is "met". The SRL parse for the sentence:

   met:
   ARG0: stakeholders (1)
   ARG1: software implementation (2)
   ARG1.1: from (3)
   ARG1.2: due (4)
   ARG1.3: to (5)
   ARG2: with (6)
   ARGM-MOD: initial (7)
   ARGM-MNR: for (8)
   ARGM-TMP: yesterday (9)

   In this SRL parse, the verb "met" is listed at the top, and the numbered arguments and modifiers are listed below it.

   The numbered arguments are:
   1. "stakeholders": This is the agent or doer of the action. In this case, the stakeholders are the ones who are doing the meeting.
   2. "software implementation": This is the patient or theme of the action. In other words, it is what the stakeholders are meeting about.
   3. "from": This is a locative argument that indicates where the software implementation is from.
   4. "due": This is a temporal argument that indicates when the software implementation is due.
   5. "to": This is a locative argument that indicates where the software implementation is being delivered to.
   6. "with": This is an instrumental argument that indicates what the stakeholders are meeting with or using.

The modifiers are:

7. "initial": This is an aspectual modifier that indicates that the meeting is in its initial stages.
8. "for": This is a purpose modifier that indicates why the stakeholders are meeting.
9. "yesterday": This is a temporal modifier that indicates when the meeting took place.

Regenerate response

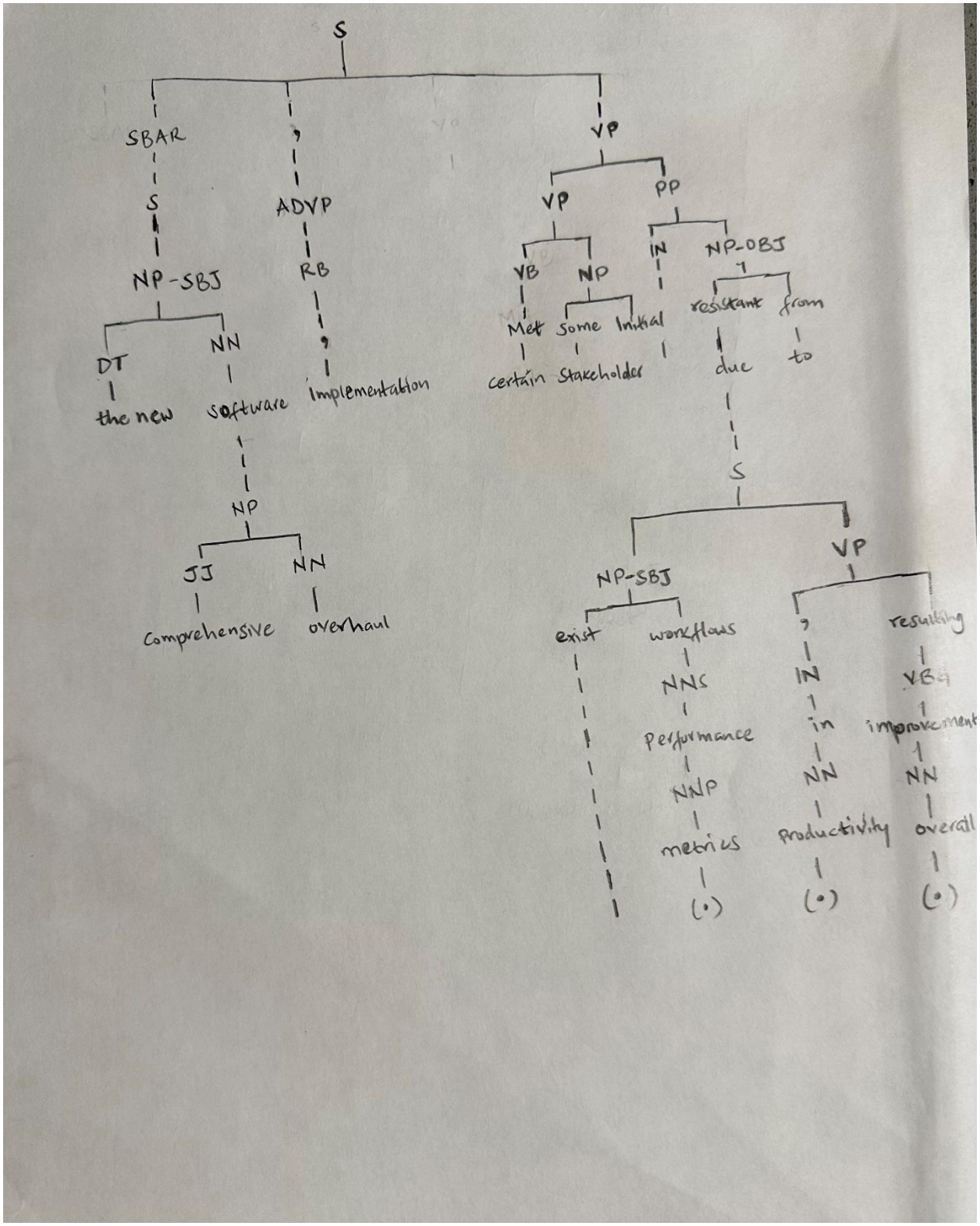
5. Write a paragraph briefly summarizing the pros/cons of each parse type (your opinion) for your sample sentence.

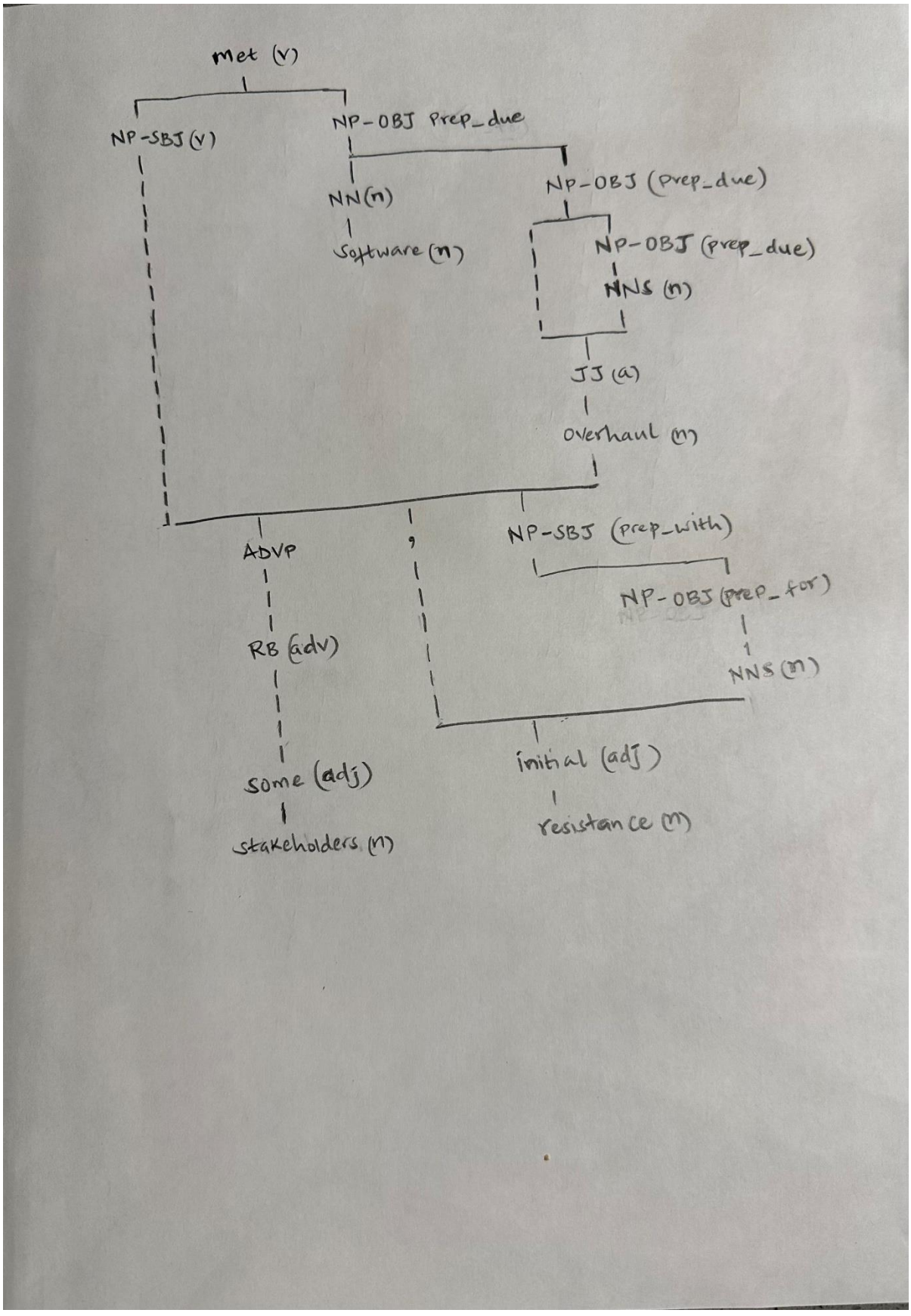
   In my opinion, each parse type has its own advantages and disadvantages when it comes to parsing the sample sentence "The stakeholders met to discuss the software implementation, due to be delivered from another department, with some initial resistance, and for the purpose of an overhaul, yesterday."

   The constituency parse provides a structural view of the sentence, showing how the sentence is composed of phrases and how these phrases are hierarchically related to each other. This makes it easy to understand the grammatical structure of the sentence. However, constituency parses may not capture all the nuances of the sentence, such as semantic relationships between words.

   On the other hand, the dependency parse captures the relationships between individual words in the sentence, providing a more detailed view of the syntactic structure of the sentence. This makes it easier to identify dependencies between words and understand the relationships between them. However, dependency parses may not provide a clear view of the overall structure of the sentence, and may be difficult to read for some people.

   Finally, the SRL parse provides a semantic view of the sentence, showing the roles of each argument and modifier in relation to the verb. This makes it easy to understand the semantic relationships between words in the sentence, and how they contribute to the meaning of the sentence. However, SRL parses may not provide a complete view of the sentence structure, and may be difficult to read for some people who are not familiar with the SRL framework.


S
SBAR
S
NP-SBJ
DT
the new
NN
software
NP
JJ
Comprehensive
NN
overhaul
,
ADVP
RB
,
Implementation
VP
VP
VB
Met
NP
certain
Some
Stakeholder
PP
IN
Initial
NP-OBJ
resistant
from
due
to
S
NP-SBJ
exist
workflows
NNS
Performance
NNP
metrics
(.)
VP
,
IN
in
NN
Productivity
(.)
resulting
VBG
improvement
NN
overall
(.)


met (v)
NP-SBJ (v)
NP-OBJ prep_due
NN (n)
Software (n)
NP-OBJ (prep_due)
NP-OBJ (prep_due)
NNS (n)
JJ (a)
overhaul (n)
ADVP
,
NP-SBJ (prep_with)
NP-OBJ (prep_for)
RB (adv)
1
NNS (n)
some (adj)
initial (adj)
stakeholders (n)
resistance (n)