Meaning of *now*

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1  *Now as a pure indexical*

(1)  

a. I learned last week that there would **now** be an earthquake.  
b. I learned last week that there would be an earthquake.  

(2)  

“Obviously there could be circumstances under which I would make a true statement if I uttered the first sentence, but false if I uttered the second...the function of the word ‘now’ in (1-a) is clearly to make the clause to which it applies—i.e., ‘there would be an earthquake’—refer to the moment of utterance of (1-a), and **not** to the moment, or moments, (indicated by other temporal modifiers that occur in the sentence) to which the clause would refer (as it does in (1-b)) if the word ‘now’ were absent. A little reflection shows that this principle correctly describes the function of the word ‘now’ in all of its occurrences.” (Kamp 1971: 229)

Kamp’s insight in Kaplan’s (1989) terms:

*Now* is a **pure indexical** — its varying content is fully determined by its character: the **time of the context (i.e. the moment of utterance)**.

(3)  

a. I am here now/I am here. (Kaplan 1989: 508)  
b. #I was here now/I was here.

**Problematic data**

(4)  

a. I will **now** introduce you to the gentleman who is in charge of your transportation and whom you have to obey (**Amerika**, F. Kafka).  
b. I will introduce you to the gentleman who is in charge of your transportation and whom you have to obey.  

(5)  

# I was here/ I was here just now.

A possible revision: Now is a **pure indexical** — its varying content is fully determined by its character: a **short interval that begins at the time of the context (i.e. the moment of utterance)**.

- This revision is inadequate when we consider **now** in past tensed narratives.
2 ‘Now’ in past tensed narratives

(6) And now Elizabeth was ‘out,’ presumably; thought him an old fogy, laughed at her mother’s friends. Ah well, so be it. The compensation of growing old, Peter Walsh thought, coming out of Regent’s Park, and holding his hat in hand, was simply this; that the passions remain as strong as ever...  
*(Mrs. Dalloway, V. Woolf)*

(7) Victoria began to look nervous, thought Jenya. She was shaking and paced back and forth. Poor thing! She learned last week that there would now be an earthquake.  
*(Altshuler 2009)*

Hypothesis: The past tense use of ‘now’ is restricted to passages of Free Indirect Discourse, which convey points of view of a particular character (e.g. Peter Walsh in (6) and Jenya in (7)). The effects of free indirect discourse are such that the relevant context of evaluation has been shifted to the past.

Direct discourse vs. Standard indirect discourse vs. Free indirect discourse *(Sharvit 2008)*

(8) As he looked at my picture, J. thought: “Yes, I want to marry her today.”

(9) As he looked at my picture, J. thought that he wanted to marry me that day.

(10) J. looked at my picture. Yes,( he thought,) he wanted to marry me today.

Free Indirect Discourse?

(11) Pilate raised his martyred eyes to the prisoner and saw how high the sun now stood above the hippodrome, how a ray had penetrated the arcade, had crept toward Yeshua’s patched sandals...  
*(The Master and Margarita)*

A historical narrative which “possesses neither characters nor any linguistic characteristics of free indirect style” *(Dry 1979: 60; see also Hunter 2010: 56):*

(12) An education at Oxford appealed to a new class of rich and well-to-do men who wished to use it to improve the prospects of their sons. The Colleges were now therefore able to charge fees proportionate to the social advantages likely to accrue.  
*(Darlington, Encounter, 1967)*

1 According to *Curry 2010*, things are actually more complex. For example, although we may think that ‘now’ refers to Peter Walsh’s now in (6), it is actually the narrator’s now; the narrator pretends to be Peter Walsh and in so doing, forces the reader to reenact, giving rise to an experience of being inside Peter Walsh’s mind.

2 Ever since *Doron’s (1991)* pioneering work, Free Indirect Discourse has often been analyzed by making reference to two contexts of evaluation. See, e.g. *Schlenker 2004, Sharvit 2008, Eckardt 2015, Maier 2015* for more discussion and implementations of this idea.
3 Time prominence account now?

Hypothesis: Now is more akin to he, then to the paradigm pure indexical I

- Like he and I, now can select a prominent entity determined by the non-linguistic context. Unlike I and like he, now can also select an antecedent from a prior discourse. That is, now is anaphoric, searching for a prominent antecedent provided by either non-linguistic context, or by the prior discourse. (Kamp & Reyle 1993, Altshuler 2009, Hunter 2010, 2012).

Hypothesis restated: Now exhibits the type of context-sensitivity of the class of expression Kaplan (1989) labels true demonstratives, of which a demonstrative pronoun is a paradigm example: their linguistic meaning is incomplete, and requires some kind of supplementation that is typically considered to rely on non-linguistic features of the utterance.

- When the speaker utters He is happy, the character—the third person, singular, male individual prominent in the context—does not suffice to determine the content: one also needs to figure out who the prominent male is, and this seems to require some extra linguistic supplementation (a speaker’s intention or a demonstrative gesture).

(13) Parallels with tense (Partee 1973)
a. I didn’t turn off the stove.
b. Whenever Mary telephoned, Sam was asleep.
c. Mary woke up some time during the night. She turned on the light.

(14) Parallels with modals (Stone 1997, 1999)
a. (Looking at the high-tech stereo in an electronics store:) My neighbors would kill me.
b. A wolf might walk in. It would eat you.
c. If a wolf walks in, it would eat you.

- Tenses and modals refer to a prominent time or possibility in the non-linguistic context, but one needs to couple this with extra linguistic reasoning to determine which time or which possibility is the most prominent.

Natural hypothesis to pursue: The character of now simply be: the time prominent in the context, where the semantics of tense restricts prominent candidates. That is, now picks out a prominent time that is compatible with the semantics of tense in the clause that now occurs in.
Problematic data

(15) #Whenever I am in Toulouse, I’m happy now.
(16) a. I hit him because he hit me.
   b. #I hit him because he now hit me. (Hunter 2012: 15)
(17) His room, a regular human bedroom, only rather too small, lay quiet between
the four familiar walls. Above the table on which a collection of cloth
samples was unpacked and spread out hung the picture of a lady, with a
fur cap on and a fur stole, sitting upright and holding out to the spectator a
huge fur muff...(*The Metamorphosis*, F. Kafka)
   a. ...Gregor was alarmed by this lady.
   b. ...#Gregor was now alarmed by this lady.
   c. ...It was hard for Gregor to see the lady’s face since it was dark in the
   room. It was nearly midnight. #He was now alarmed by this lady.

4 State prominence account of now

Proposal: *Now* is an anaphoric expression that picks out final states of prominent
events (possibly the speech event); *now* does NOT pick out prominent times.

- Intuitive contribution of *now*: “with that having happened”.

(18) Bound use of *now*
   a. Every artist reaches that point, where she is now ready for her master-
   piece.
   b. Whenever one wins the lottery, they are now in a position to buy a new
   home (Gregory Ward, p.c.).
(19) His room, a regular human bedroom, only rather too small, lay quiet between
the four familiar walls. Above the table on which a collection of cloth
samples was unpacked and spread out hung the picture of a lady, with a fur
cap on and a fur stole, sitting upright and holding out to the spectator a huge
fur muff. **Suddenly, the lady smiled at Gregor. He was now alarmed.**

*Now* in narrative discourse

(20) Within a couple of minutes a huge male tiger – later to be identified as
‘Budha Bapp’ – emerged from behind some rocks and bushes and lay down
in a clearing close beside her. **The tigress now got up again** as if in a half
daze, walked up to him, pushed against his shoulders and head and lay
down right in front of him. (*Wild experiences*, P. Gupta)
While there are vertices in $P$ with indegree 0, pick one of them, say $q$, and set $\text{ord}(q)$ to be the smallest value in $\{1, \ldots, n\}$ which is not yet an image of some point. **Now remove $q$ from $P$ and lower all the indegrees of the neighbors of $q$ by 1.**

First we take a saucepan, and on a low heat we melt our butter or margarine, next add the flour a little at a time, **we now mix the two ingredients together**, and what we have now, is called a roux. (*Cook like mum*)

### Anaphoric to the speech event

a. I will **now** introduce you to the gentleman who is in charge of your transportation and whom you have to obey (*Amerika*, F. Kafka).

b. I will introduce you to the gentleman who is in charge of your transportation and whom you have to obey.

I was here (just) now.

I learned last week that there would now be an earthquake.

### Change of state intuition

Anna is happy (now).

- Recanati (2004) claims that ‘now’ picks out a time that is contrasted with another time’.

- Hunter (2010: 70) builds on this idea, proposing that the contrast is built into the lexical semantics of ‘now’. Later Hunter (2012) rejects her earlier analysis, noting many examples where a change of state inference is not found with *now*.

New analysis based on Altshuler & Stojnić 2015, Altshuler 2016 and Carter & Altshuler 2017:

\[
\lambda P \exists s \exists v: \text{FinalState}(e_i) = s \land \text{Onset}(v) \subseteq \tau(s) \land P(v)
\]

b. **Now** takes a complement denoting a descriptor $P$ (a property of eventualities) and introduces three discourse referents: $e$, $s$ and $v$ (an event, state and eventuality), requiring that:

- $e$ is identical to some prominent antecedent event.
- $s$ is identical to the final state of $e$.
- $v$ satisfies the descriptor $P$ denoted by the complement of *now*, and has an onset time within the run time of $s$. 
Now in *because* clauses:

(28)  
  a. I hit him...  
  b. ....because he hit me.  
  c. ...#because he now hit me. (Hunter 2012: 15)  

- Only the hitting event described in (28-a) could satisfy the anaphoric requirement imposed by *now* in (28-c).

- Given (27), the onset of the hitting event described in (28-c) must be within the run time of the final state of the hitting event described in (28-a). This conflicts with the semantics of *because*.

(29) We recruited three real bargirls who dance in the bar scenes and have a few lines. As we wrapped, one of them came to say goodbye, and started to cry. She said that it was the first time that she had been treated with respect and was able to do a job that she didn’t have to be ashamed of. She was crying because she now had to return to working in the bar.

- *As we wrapped* describes the completion of a film scene that was being shot. We understand that some state of the film shooting had been reached, when a bar girl came to say goodbye and began crying.

- Assume that the onset of necessity to return to work – described by the complement of *now* – held during this state of the film shooting. It follows that the onset of the necessity to return to work held *prior* to the crying, explaining why *because* is used.

Some data that requires further thought

(30) Now is the time to stand up.

(31) Shawn is just an angel. Now that brother of hers, he’s something else entirely (Julie Hunter, p.c.).

(32)  
  a. John should be at home by now.  
  b. John was at home just now.  
  c. Come here, right now.  
  d. You can stay here for now.
5 Subordinating uses of ‘now’ (Carter & Altshuler 2017)

5.1 Now taking a subordinate clause

(33) Now that J had reached the highest col, she could see the summit above her.
(34) J could see the summit above her, now that she had reached the highest col.
(35) J had reached the highest col. Now she could see the summit above her.
(36) Now that J had finished sautéing the onions, he stirred in the wine.
(37) J had finished sautéing the onions. Now he stirred in the wine.

The subordinate clause position of now is not-at-issue:

(38) a. It isn’t the case that Jean-Paul is any happier, now that he is rich.
    b. Is Jean-Paul any happier, now that he is rich?
    c. Jean-Paul might be happier, now that he is rich.
    d. Katja believes that Jean-Paul is happier, now that he is rich.

The subordinate clause position of now selects for statives:

(39) Now that Mary had bought a memory foam mattress, she could sleep far more comfortably.
(40) ??Now that Mary bought a memory foam mattress, she could sleep far more comfortably.
(41) Mary bought a memory foam mattress. She could sleep far more comfortably now.

More coherent narrative with subordinate use of now

(42) Now that Uri enjoyed his job, he looked forward to going to work.
(43) Uri enjoyed his job. ??Now he looked forward to going to work.

5.2 Toy analysis

• Make the subordinate usage of now as basic
  • Now is assigned the type of a determiner (i.e. ⟨⟨⟨α⟩⟩⟩⟨⟨α⟩⟩t):

(44) \[ \lambda P \cdot P(s) \land \text{FinalState}(e) = s \cdot \lambda Q \cdot \text{Onset}(v) \subseteq \tau(s) \land Q(v) \]

• The non-subordinate uses of now are derived via a type-shifting operation:

(45) \[ \lambda \Pi \langle ⟨α⟩⟩⟨⟨α⟩⟩t \lambda P_{⟨α⟩} \cdot \Pi(\lambda x_α \cdot x_α = x_α)P \]
Now takes one or two complements denoting descriptors, introducing three discourse referents: e, s and v (an event, state and eventuality), requiring that:

– s be identical to the final state of e.
– v to satisfy the descriptor denoted by the main clause and has an onset time within the run time of s.

In subordinate taking uses of now:

– s satisfies the descriptor in the subordinate clause (not at issue).
– each variable undergoes obligatory existential closure.

In non-subordinate taking uses of now:

– e is identical to some prominent antecedent event.
– the state and eventuality variables undergo existential closure.

Hypothesis: The contrast in (42)-(43) can be explained in terms of the contrast between the potential for accommodation of presupposition vs. antecedents for anaphora.

Whereas the presupposition in (46) is easily accommodated, the same is not true of the antecedent in (47).

(46) Q: Who is picking up Jim from the airport? A: His sister will pick him up.
(47) Q: Who is picking up Jim from the airport? A: ??She will pick him up.

Accommodation is hard(-er) rather than impossible. For example, (48) can be made felicitous discourse initially via accommodation, but (49) is much easier to make sense of.

(48) She left me. (Partee 1973)
(49) My wife left me.

Accordingly we would expect now to improve when embedded within an appropriate discourse.

(50) Uri enjoyed his job. ??Now he looked forward to going to work.
(51) Uri used to hate coming in to work. He had felt useless and directionless. However, as soon as there were was a clear purpose to his project, Uri enjoyed his job. He now looked forward to going to work.
5.3 Comparison with when/while

Like, (52), (53)-(54) entail that the run time of the state of Vera being in London overlaps with Andi throwing a party.

(52) Andi threw a party now that Vera was in London.
(53) Andi threw a party when Vera was in London.
(54) Andi threw a party while Vera was in London.

- Unlike (52), (53)-(54) imply that the state described in the subordinate clause ceased to hold (Altshuler & Schwarzschild 2013). Moreover, (52), unlike (53)-(54), implies that the described state is a pre-condition for the event asserted to exist in the matrix clause.

(55) ??Now that I was on the beach in Barcelona, it was snowing in London.
(56) While/when I was on the beach in Barcelona, it was snowing in London.

Many temporal connectives (though, notably, not when) also have an anaphoric use in which they lack a subordinate clause. Unlike now, this is typically marked by a morpheme of some form:

(57) While Claude hung up the decorations, Juliet inflated the balloons.
(58) Claude hung up the decorations. Meanwhile, Juliet inflated the balloons.
(59) Before Claude hung up the decorations, Juliet inflated the balloons.
(60) Claude hung up the decorations. Beforehand Juliet inflated the balloons.
(61) After Claude hung up the decorations, Juliet inflated balloons.
(62) Claude hung up the decorations. Afterwards Juliet inflated the balloons.

**Hypothesis**: The morphemes mean/-hand/-wards have a uniform meaning and denote the type-shifting operator proposed in (45).

**To do**: Typology of temporal connectives (before, after, while, when...), explaining how their semantic contribution places constraints on the discourse.
6 Conclusion

• Proposal: *Now* has an anaphoric function: relating the onset of the eventuality described by its complement to a final state of a prominent event.

• This proposal is significant because it provides evidence for the existence of underlying states. *Now* could not be analyzed in terms of mere temporal intervals.

• Considered cases in which *now* take a subordinate clause and explored the idea that this use is basic; the non-subordinate usages of *now* are subject to a type shifting operation.

• The interpretative differences between subordinate and non-subordinate usages of *now* were explained via the potential for accommodation of presupposition vs. antecedents for anaphora.

• Comparsion with when/while suggests that they too can be treated on a par with *now*, and the morphemes *mean-/hand/wards* are overt manifestations of the type shifting operation.

References


