DISPOSITIONAL 'WILL' IS 'WANT' IN COLLOQUIAL JAKARTA INDONESIAN*

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The verb *mau* 'want' can be used as a future marker in Indonesian (Copley 2002, 2010; Jeoung 2020). When it has a future meaning, it does not require an attitude holder, and is thus compatible with inanimate subjects which cannot have desires. Through original fieldwork from Colloquial Jakarta Indonesian, we present some newly observed restrictions on the use of *mau* as a future marker. More specifically, we argue that it behaves like a weak positive polarity item, since it cannot be directly negated. Negating *mau* amounts to negating 'want' rather than 'will'. Additionally, the distribution of *mau* as 'will' is more restricted than that of the regular colloquial version of 'will', *bakal*. We propose to characterize this via a requirement that the subject of *mau* as 'will' is disposed to causing the future event. We formalize this as a presupposition, using the notion of *dispositional causation* described in Copley (2018). This paper contributes to the understanding of the use of *mau* as a future modal in Indonesian, as well as shows that in Indonesian 'want' can synchronically mean 'will', a change which is diachronically attested in many languages (e.g.,Bybee and Pagliuca (1987); Bybee and Dahl (1989); Nesselhauf (2012); Heine (2017) a.o.).

1. Introduction

The verb *mau* 'want' in Indonesian also has a life as a future modal meaning 'will' (Copley 2002, 2010).[1] This paper presents original fieldwork conducted with a native speaker of Colloquial Jakarta Indonesian, and investigates several empirical puzzles related to the meaning of *mau* as 'will' (henceforth *future mau*). More specifically, we identify a novel negation puzzle, observing that future *mau* empirically patterns with weak Positive Polarity Items (heceforth PPI). We also characterize the empirical distribution of future *mau*, observing that it is more restricted than that of the regular future marker of Colloquial Jakarta Indonesian, *bakal*. We argue that there is a requirement that the subject of future *mau* is disposed to causing the future event.

Verb stems are always bare in Colloquial Jakarta Indonesian, a sentence with no future marking being compatible with both a present and a past tense interpretation. It is the context that disambiguates between the two. Therefore, the following sentence with the bare stem *nyanyi* 'sing' is compatible both with a present and with a past tense interpretation, but crucially not with a future tense one.

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[1] See Jeoung (2020) for arguments in favor of categorial ambiguity of *mau*, although we need not commit to his analysis here. The empirical point made in this paper is that *mau* can be interpreted as a verb or as a future modal.

(1) Lia nyanyi.
Lia sing
'Lia is signing/sang.'
✓Context: *Lia is singing now.*
✓Context: *Lia sang a song and is not signing anymore.*
✗Context: *Lia is going to sing.*

Instead, the future is obligatorily marked. In Colloquial Jakarta Indonesian this is usually done with the marker *bakal* preceding the verb stem.[2]

(2) *What will Lia do at the event?*
Lia *(bakal) nyanyi.
Lia will sing
'Lia will sing.'

To receive a future tense interpretation in the sentence above, *bakal* is necessary, even if the context is such that we are clearly referring to the future. Another way to have a future tense interpretation without *bakal* is if there is a temporal phrase in the sentence referring to the future, as in the following:

(3) Tiga hari lagi, aku (bakal) main bulah barang sepupu aku.
Three day more I will play ball stuff cousin mine
'In 3 days, I will play football with my cousin.'

In the rest of this paper, we will show that *mau* 'want' can also be used to mark the future, and we will investigate two ways in which it differs from the regular future marker *bakal*: (i) it behaves like a (weak) PPI, and (ii) it introduces a presupposition that its subject is disposed to causing the future event. In Section 2, we present the use of *mau* 'want' as a future marker. In Section 3, we show that its distribution empirically patterns with that of weak PPIs. Finally, in Section 4, we propose an analysis arguing that that future *mau* is the dispositional 'will'.

2. Future *mau*: *want* as *will*

Colloquial Jakarta Indonesian has two verbs to express a 'desire' meaning, *pengen* and *mau*. When the meaning of 'want' is targeted, both can be used interchangeably, with no noticeable difference in their interpretations. This is illustrated in the following:

(4) *What job did you want to do when you were little?*
Aku dulu pengen/mau jadi dokter.
I before want become doctor.
'I wanted to be a doctor.'

However, *mau* can also be used as a future marker, without expressing the meaning of desire, and thus eliminating the need for an attitude holder. This use of *mau* is what we call the *future mau*.[3]

[2] Our speaker never uses *akan* except in formal contexts when she would speak in the standard rather than in the colloquial dialect. Therefore we will not discuss *akan* in the present paper. This is also an important difference with Copley (2010), who discusses *mau* as opposed to *akan*.
[3] We will be glossing future *mau* as FUT and desire *mau* (also spelled out as *pengen*) as WANT.

(5) *I am a college student, the exam schedule is out.*
Aku mau ujian hari senin.
I FUT exam day Monday
'I will have an exam on Monday.'

In the example above, the use of *mau* is not that of desire *mau*, since the meaning of the sentence is not that *I want to*, but simply that *I am going to* have an exam on Monday. It thus seems that future *mau* no longer retains the desire component of 'want'. Indeed, given that future *mau* does not express desires, there is no need for an attitude holder capable of having such desires. In other words, future *mau* can be used with inanimate subjects, to which we cannot attribute intensionality or desires:

(6) *The food has been in the oven for a long time. My partner warns me:*
Makanan=nya mau gosong!
Food-DEF FUT burn
'The food is about to burn!'

This is perfectly felicitous in a situation where *mau* is expressing a proximate future, and it does not imply any metaphorical or "funny" readings attributing desires to its inanimate subject.

As a matter of fact, *pengen* perfectly contrasts with future *mau*, since its distribution is exactly what one would expect 'want' to be in a language, being infelicitous if we target a future meaning which cannot be re-analyzed as a desire. In the example below, where the subject is inanimate, and thus *mau* does not have a parse as a desire verb, *pengen* is infelicitous:

(7) *The book is at the edge of the bookshelf, I am afraid it will fall.*
a. Mau jatuh buku=nya.
FUT fall book-DEF
'The book will fall.'
b. #Pengen jatuh buku=nya.
want fall book-DEF
Intended: 'The book will fall.'

The use of *pengen* in (7b) has the same effect as its English counterpart would have, giving rise to an implausible metaphorical reading, where desires are being attributed to the book.

Could it be that there is one single under-specified entry for *mau*, which gives rise to its desire meaning sometimes and its future meaning in other cases? We argue against this, and in favor of lexical ambiguity of *mau*. It cannot be that desire and future *mau* share the same lexical entry, since (i) future *mau* is a modal (Copley 2002, 2010; Jeoung 2020), if we assume that 'will' is a modal (see Bochnak (2019) for an overview), while desire *mau* is a lexical verb and (ii) they do not have the same meaning. Desire *mau* requires an attitude holder and quantifies over their buletic alternatives, while future *mau* quantifies simply over accessible worlds.[4] Indeed, positing two distinct lexical entries would correctly predict that both desire and future *mau* can be used in the same context, one being asserted and the other being negated without generating a contradiction. This prediction is borne out, as we can see below, where we are negating desire *mau* and asserting future *mau* in (8a) without any contradiction arising:

[4] If we assume structure in the lexicon, it could be that these two entries are derived from the same under-specified lexical entry for the future. This will stay as a speculation for the moment, leaving it open for future research.

(8) *We are at a party, but it's getting late. I need to leave.*

a. Sebenarnya aku nggak mau, tapi aku mau pulang sekarang ya.
actually I NEG WANT but I FUT go-home now ok
'I don't actually want to but I will go home now.'

b. Sebenarnya aku nggak pengen, tapi aku mau pulang sekarang ya.
actually I NEG WANT but I FUT go-home now ok
'I don't actually want to but I will go home now.'

c. #Sebenarnya aku nggak pengen, tapi aku pengen pulang sekarang ya.
actually I NEG WANT but I WANT go-home now ok

d. #Sebenarnya aku nggak mau, tapi aku pengen pulang sekarang ya.
actually I NEG WANT but I WANT go-home now ok

It's also possible to negate *pengen* and assert future *mau*, as in (8b), and again, no contradiction arises. As a control, we can see that negating and asserting *pengen* gives rise to a contradiction, since in (8c) the speaker has contradictory beliefs. This leads us to posit two lexical entries for *mau*, one for desire and one for future *mau*, at least synchronically, although diachronically it is perfectly possible that one has been derived from another. In fact, this would be an interesting direction for future research to explore, especially given that diachronically, cross-linguistically, verbs of desire evolve into future markers (e.g.,Bybee and Pagliuca (1987); Bybee and Dahl (1989); Nesselhauf (2012); Heine (2017) a.o.). In the case of Colloquial Jakarta Indonesian, we see that *synchronically* the same verb, namely *mau*, has a lexical entry as a desire main verb, like *pengen*, and one as a future modal auxiliary, like *bakal*.

However, going back to example (8), one may ask: why is (8d) contradictory, where *mau* is being negated and *pengen* asserted? If *mau* is indeed ambiguous between a desire and a future meaning, why do we not save the structure in (8d) by interpreting NEG MAU as NEG FUT, while asserting *pengen* 'want'? This would be a perfectly coherent meaning of the sort 'I'm not actually going to, but I want to go home now' (in a context where I stay to do someone a favor against my will for example).

The reason why this parse is unavailable is because future *mau* (but crucially not desire *mau* as we can see in (8a)) behaves like a PPI. In the next session, we will present the relevant data, showing that future *mau* empirically patterns with weak PPIs.

3. A puzzle with negation: future *mau* as a PPI

One of the novel empirical generalizations made in this paper is that future *mau* behaves like a PPI. It cannot be directly negated, and adding the colloquial negation *nggak* before *mau* can only give rise to a 'not want' meaning rather than a 'will not' one. This is illustrated with the following example, where the context is asking a question about the future, and yet the only possible interpretation of *nggak mau* is negating desire *mau*.

(9) *Will you be at the concert tomorrow?*
#Aku nggak mau ke konser=nya.
I NEG WANT to concert-DEF
'I don't ✓want to/✗will not go to the concert.'

We should note that, since the dialect studied in this paper is Colloquial Jakarta Indonesian, we will only be considering the negation *nggak*. Our speaker only uses *tidak* in formal contexts.

Interestingly, when the negation *nggak* is added to *mau* the sentence regains the ambiguity between a present and a past tense interpretation that we see in bare verb stems. In other words, a sentence with *nggak mau* behaves as if there is no future marker. This naturally follows if future *mau* is a PPI, which only leaves to the negation *nggak* the option of applying to desire *mau*. Since the latter is a lexical verb, it behaves like other verbs in being ambiguous between a present and a past tense interpretation at the absence of a future marker. This is illustrated below in (10):

(10) *There is a faculty trip being organized, and no students are allowed to attend.*
#Nggak ada mahasiswa yang mau pergi.
NEG EXIST student REL.CL WANT go
'There is no student who ✓wants/ ✓wanted to/ ✗will go.'

Given that the negation only targets desire *mau*, it is naturally incompatible with inanimate objects, which cannot have desires as in (11). This is expected if [NEG future *mau*] is an unavailable parse.

(11) *We are preparing the room for an exam, and the clock is not working.*
*Jam=nya nggak mau nunjukin waktu yang benar.
clock-DEF NEG WANT show time REL.CL correct
Intended: 'The clock will not show the correct time.'

Is future *mau* only incompatible with a negation directly preceding it? No, on a par with other PPIs, future *mau* is incompatible with downward entailing quantifiers. We already saw this for the negative quantifier in (10), but we also illustrate it below for NOT ALL:

(12) *There is a school trip being organized, and all students are looking forward to attending. Unfortunately, there are not enough places for all of them.*
Nggak semua murid ✓bakal/ ✗mau pergi.
NEG all student FUT WANT go
'Not all students will go.'

How, then, can you negate the future? In all these environments, where we have a negation, a negative or a downward entailing quantifier, we would use the regular future marker *bakal*. The latter can be negated, and is perfectly felicitous in the environments above, where *mau* is infelicitous. Indeed, as we can see in (12) *bakal* is used with the quantifier NOT ALL.

If future *mau* is a PPI, we should ask what kind of a PPI it is. Let's follow the literature in calling negation and other environments that make a PPI infelicitous, such as downward-entailingness, *antilicensers*. The strength of a PPI can be calculated based on whether or not it cares about the clause boundaries between its antilicenser and itself. Borrowing the terminology of Spector (2014), let us call a PPI *weak* if it tolerates an antilicenser across a clause boundary, and *global* if it does not tolerate any antilicenser.[5] What kind of a PPI is future *mau*?

If the antilicenser is in a higher clause and future *mau* is separated with a clause boundary from it, then future *mau* is felicitous. Indeed, in the following example, if we negate the verb *yakin* 'believe' in the higher clause, we can still use *mau*, even with an inanimate subject. This suggests that *mau* is felicitous in this context despite the fact that it cannot be re-analyzed as desire *mau*.

[5] We leave the question of whether the number of antilicensers matters, and more specifically whether the PPI is licensed with an even but not with an odd number of antilicensers, open for future research.

(13) *My colleague and I are preparing the room for an exam. I think the clock is about to stop, but my colleague reassures me it will not stop during the exam.*
Aku nggak yakin kalo jam=nya mau mati.
I NEG believe COMP clock-DEF FUT stop
'I don't believe that the clock will stop.'

If we assume that *yakin* 'believe' is a neg-raising verb, then NEG *yakin* . . . *mau* should be equivalent to *yakin* . . . NEG *mau* at the level of the Logical Form. This would indicate that despite the fact that we cannot negate future *mau* directly, we can do so indirectly.

However, it is not clear that *yakin* 'believe' is indeed a neg-raising verb, and thus that we can indirectly negate future *mau*. *Yakin* is sometimes translated as 'certain', which is not neg-raising, since 'not certain that x' is not usually interpreted as 'certain that not x'. What is more, in the following context *yakin* does not behave like a neg-raising verb, since (14a) conveys a very different meaning than (14b). Uttering (14a), we are uncertain about whether the horse will win or not, while uttering (14b) we are certain that the horse will lose.

(14) *I own a horse, and my horse is running a race today. During the time of the race, I have to be in an airplane, so I will not be able to see who's leading. In the airplane, while the race is taking place, I say:*

a. Aku nggak yakin kuda-ku bakal menang.
I NEG certain horse-MINE FUT win
'I'm not sure that my horse will win.'

b. Aku yakin kuda-ku nggak bakal menang.
I certain horse-MINE NEG FUT win
'I'm sure that my horse won't win.'

However, in other cases, when *yakin* is translated as 'believe' it behaves like a neg-raising verb, as in the example below.

(15) *Is Karina a good or a bad student?*

a. Saya nggak yakin kalo dia rajin.
I NEG believe COMP she studious
'I don't believe that she is studious.'

b. Saya yakin kalo dia nggak rajin.
I believe COMP she NEG studious
'I don't believe that she is studious.'

Given that the data point to different directions, we cannot conclude that *yakin* is a neg-raising verb, although it is possible that whenever it is translated as 'believe' it behaves like a neg-raising verb.

That being said, future *mau* still behaves like a weak PPI, since the presence of a negation in a higher clause as in (13) does not antilicense it. The same is true for other kinds of antilicensers, like negative quantifiers. Future *mau* is compatible with a negative quantifier if the latter is on a higher clause. Like in (13), we control for the desire reading of future *mau* by using an inanimate subject, which cannot have desires.

(16) *There is a volcano, but it hasn't been active for years.*
Nggak ada yang percaya kalo gunu=nya mau melatus.
NEG EXIST REL.CL believe COMP volcano-DEF FUT erupt
'There is noone who thinks that the volcano will erupt.'

As we can see in (16), when a negative quantifier is separated by a clause boundary from future *mau*, the latter is felicitous, even when the subject is inanimate. One could wonder whether there are in fact two clause boundaries between the negative quantifier and future *mau* in (16), given that there are both *yang* and *kalo*. Investigating whether *yang* introduces a clause boundary is beyond the scope of this paper, however, at least for the purposes of future *mau* licensing, *yang* does not seem to introduce a clause boundary. Indeed, we had seen in (10), repeated below as (17) for reference, that a negative quantifier antilicenses future *mau*, and in that case *yang* did not count as introducing a clause boundary.

(17) *There is a faculty trip being organized, and no students are allowed to attend.*
#Nggak ada mahasiswa yang mau pergi.
NEG EXIST student REL.CL WANT go
'There is no student who ✓wants/ ✓wanted to/ ✗will go.'

We thus see that future *mau* behaves like a weak PPI, since it tolerates antilicensers separated by a clause boundary. This also refutes a simple theory which would suggest that there is some surface incompatibility of future *mau* with negation or negative quantifiers. Indeed, the distribution of future *mau* closely follows the distribution of weak PPIs like English *something*. The latter cannot be interpreted in the scope of a clausemate negation, but can be interpreted within the scope of a negation across a clause boundary (see Szabolcsi (2004); Nicolae (2012) a.o.).

(18) John didn't say something.
✓There is something that John did not say.
✗John said nothing.

(19) I don't think that John said something.

Indeed, as we will see, the distribution of future *mau* perfectly aligns with that of a weak PPI like *something*. Future *mau*, like *something* is compatible with ellipsis, suggesting once again that there is no surface incompatibility with the negation *nggak*.

(20) *I think the clock is about to stop, but my colleague is less certain.*
Aku nggak tau jam=nya mau mati atau nggak.
I NEG know clock-DEF FUT stop or NEG
'I don't know whether the clock will stop or not.'

We should note, however, that it is unclear whether future *mau* is indeed being elided here, since the speaker cannot overtly pronounce it:

(21) *I think the clock is about to stop, but my colleague is less certain.*
??Aku nggak tau jam=nya mau mati atau nggak mau mati.
I NEG know clock-DEF FUT stop or NEG FUT stop
Intended: 'I don't know whether the clock will stop or will not stop.'

If anything, it seems that what is being elided is the regular colloquial future marker *bakal*, even though it is not perfectly pronounceable either. The speaker does, however, report a contrast between pronouncing *bakal* as in (22) and pronouncing *mau* as in (21). The latter is less felicitous.

(22) *I think the clock is about to stop, but my colleague is less certain.*
?Aku nggak tau jam=nya mau mati atau nggak bakal mati.
I NEG know clock-DEF FUT stop or NEG FUT stop
'I don't know whether the clock will stop or will not stop.'

Eliding simply the VP is ungrammatical:

(23) *I think the clock is about to stop, but my colleague is less certain.*
*Aku nggak tau jam=nya mau mati atau nggak mati.
I NEG know clock-DEF FUT stop or NEG FUT
Intended: 'I don't know whether the clock will stop or not stop.'

To recapitulate, future *mau* is compatible with a negation when elided, as in (24) below, although it is unclear (and would depend on the identity condition we assume for ellipsis) whether *mau* or *bakal* is being elided in this case.

(24) *There is a volcano, and people are discussing whether it will explode. An expert is very uncertain.*
Gunung=nya munkin mau melatus, munkin juga nggak.
Volcano-DEF maybe FUT erupt maybe also NEG
'The volcano might erupt, but it might also not.'

Once again, the ellipsis facts follow the distribution of PPIs like *something*.

(25) Mary said something, but John didn't.

We argued that there is no surface incompatibility between the negation *nggak* and future *mau*, but we did not so far see any examples where *nggak* future mau directly surfaces. We argue that this is possible with metalinguistic negation, which does not affect truth conditions like regular negation. In the example below, *nggak mau* surfaces, with contrastive stress (marked by capitalization) on NGGAK and on UDAH. Crucially, the future meaning conveyed by *mau* is not directly negated despite the appearance of the surface string *nggak mau*.

(26) *A precious old library book is about to fall. I say "Bukunya mau jatuh!" (The book is about to fall!). My friend answers:*
Nggak, itu buku=nya NGGAK mau jatuh, itu buku=nya UDAH jatuh.
No, this book-def NEG MAU fall, this book-def already fall
'No, this book is not about to fall, it already fell.'

The same can be said for metalinguistic negation with weak PPIs like *something* (Nicolae 2012):

(27) John didn't say SOMETHING, he said EVERYTHING.

To summarize this section, we saw that future *mau* cannot be directly negated or be in the same clause with an antilicenser, such as a negative or a downward entailing quantifier. It patterns like weak PPI, like *something*, in that it can tolerate an antilicenser across a clause boundary. It also behaves similarly to PPIs with respect to ellipsis, and its compatibility with metalinguistic negation. It would be natural to account for this on a par with other PPIs, which parallel to Negative Polarity Items have been argued to give rise to contradictory meanings when their meaning is exhaustified in the scope of an antilicenser (see, e.g., Nicolae (2012); Iatridou and Zeijlstra (2013); Spector (2014); Nicolae (2017) a.o.). However, in this case, it is not clear what the alternatives would be. So, for the purposes of this paper, we characterise future *mau* as a PPI, leaving an analysis of its PPI-hood for future research. In the next Section, we will explore another interesting novel generalization about the meaning of future *mau*, namely that its subject needs to be disposed to causing the future event.

4. The dispositional requirement

We have seen that *mau* can be used as a future marker, and that as such it has the distribution of a weak PPI. A natural question to ask would then be: can we replace any positive instance of the regular future marker *bakal* with *mau*? In fact, we will argue that not all *bakal*s can be *mau*s, even in positive environments, where there is no antilicenser. To our knowledge, this property of future *mau* has not been described yet. We will propose a generalization, according to which there is a dispositional requirement on future *mau*, which we will argue is a presupposition. We will characterise this dispositional requirement borrowing the notion of dispositional causation from Copley (2018), and arguing that the subject of future *mau* needs to be disposed towards *mau*'s prejacent proposition.

The intuition of our consultant is that for future *mau* to be licensed there need to be "signs" for the future event. For instance, in the following example, the water boiling indicates that it will overflow.

(28) *I am cooking pasta. The water is boiling, and the lid is shaking.*
Air=nya mau meluap.
Water-DEF FUT overflow
'The water will spill over.'

To further illustrate this, consider the scenario in (7a), repeated below as (29) for reference:

(29) *The book is at the edge of the bookshelf, I am afraid it will fall.*
Buku=nya mau/bakal jatuh.
book-DEF FUT fall
'The book will fall.'

This is a scenario where future *mau* would be perfectly licensed, just like the regular future marker *bakal*. In this case, the book being at the edge of the bookshelf is what counts as the "sign" that licenses future *mau*. In other words, the book is in a state that can result into falling. Intuitively, it seems that the subject is in a state (e.g., at the edge of the bookshelf) that is able to directly cause the future event (e.g., its falling).

If the subject is not in such a state, i.e., if there is no "sign" that the book is about to fall, then future *mau* is infelicitous, and *bakal* would be used instead.

(30) *The book is well-secured in the middle of the bookshelf. However, a magician in the room who wants to show off his skills says:*

a. Buku=nya bakal/#mau jatuh.
book-DEF FUT fall
'The book will fall.'

b. Tanpa diapa-apain buku itu bakal/#mau jatuh.
without nothing-done book DEM FUT fall
'Without any reason, that book will fall.'

We propose to characterize this requirement governing the distribution of future *mau* as a *dispositional* requirement. More specifically, in the next section we will argue that the subject should be the holder of some state e which can directly cause a state e', instantiating the future event. Crucially, future *mau* is not licensed if there is no such state. For example, I cannot rely on the weather report to assert future *mau* in (31), because there are no clouds that can directly cause rain. However, if there are signs of rain, as in (32), then future *mau* becomes perfectly felicitous.

(31) *The weather in Boston changes very fast. Right now it looks like a beautiful day, the sun is shinning so far, and there is no indication of rain. The weather report, however, says that it will rain later today.*
(Ini) ✓bakal/ ✗mau hujan.
It FUT rain
'It will rain.'

(32) *I look outside the window, and there are dark clouds outside.*
(Ini) bakal/mau hujan.
It FUT rain
'It is about to rain.'

Supposing our proposed generalization that there is a dispositional requirement on the subject future *mau* is on the right track, we need to assume that in cases like (31) and (32) there is a silent subject, e.g., 'the weather', at the Logical Form. This is not implausible for rain sentences, and in fact, in English too, we can use a dummy subject with weather verbs even when we use an intensional verb, which would require not only a subject but also an attitude holder (Norvin Richards, p.c.):

(33) *There are some clouds.*

a. It's thinking about raining.

b. It's trying to decide whether to rain or not.

Is this dispositional requirement a presupposition or is it part of the asserted content of future *mau*? It is hard to directly test this, since future *mau* is a PPI and cannot be directly negated. However, luckily, it is a weak PPI, and therefore we can test whether the presupposition projects over a negation in the higher clause. The following example suggests that it does.

(34) *Karina, Ali and Mia are classmates. Karina is very bad at math, but took intensive private classes over the summer and has now become great at math! Ali, her best friend, knows this. But Mia, who is not their friend still thinks that Karina is bad at math. On the first day of school she says that Karina will fail the class. Ali objects to defend her:*
Aku nggak yakin kalo Karina ✓bakal/ ✗mau gagal!
I NEG believe COMP Karina FUT fail
'I don't believe that Karina will fail!'

The reason why we cannot felicitously use future *mau* in the example above cannot be the negation, since there is a clause boundary, and as shown in (13), antilicensers in a higher clause do not affect the licensing of future *mau*. (34) is instead a presupposition failure, since the presupposition that Karina is in a state that can directly cause her to fail at math is no longer true for Ali, who knows that she is now good at math. In other words, Ali has no "sign" that Karina will fail, the presupposition projects over the negation of the higher clause.

Another way to indirectly negate future *mau* is when it is elided under negation. In that case too, its presupposition projects. In the following example, what is targeted by the possibility modal *mungkin* 'possible' is the assertive content of future *mau*, not the dispositional requirement on its subject. In other words, the speaker does not convey that there is a possibility that the book is not in a state that can cause its falling; rather, what the speaker is asserting is that, despite being in that state, there is a chance that the book will not fall.

(35) *The book is at the edge of the bookshelf.*
Buku=nya mau jatuh itu, tapi mungkin juga nggak.
Book-DEF FUT fall DEM but possible also NEG
'The book is about to fall, but it's also possible it won't.'

Lastly, in the example below *kayaknya* 'maybe' targets the assertion rather than the presupposition of future *mau*. More specifically, what the speaker is unsure of is whether the book will fall or not; they are, nonetheless, certain that the book has a reason to fall, i.e., is in a state that can directly cause its falling.

(36) *The book is at the edge of the bookshelf.*
Kayaknya buku=nya mau jatuh.
maybe book-DEF FUT fall
'Maybe the book will fall.'

In this Section, we examined the ways in which the distribution of future *mau* is restricted compared to that of the regular future *bakal*. We proposed the generalization that there is a dispositional requirement on the subject of future *mau*, which needs to be in a state that can directly cause the future proposition. We further argued that this requirement is a presupposition. In what follows, we will propose a lexical entry for future *mau* relating it to dispositional 'will' (Copley 2002), but also enriching is meaning to account for the dispositional requirement.

5. 'Mau' as the dispositional 'will'

We propose that future *mau* is a specification of the regular 'will' *bakal*, with an additional presupposition on its subject. More specifically, in line with Copley (2002, 2010), we analyze future *mau* as the dispositional 'will', suggesting that the subject is disposed to causing the eventuality of the

verb. Copley (2002) discusses uses of dispositional 'will' in English, like the following example:

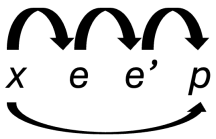
(37) Dogs will eat doughnuts.
Dispositional reading: If you give a dog a doughnuts, the dog will eat it.

Copley (2010) also notes that Indonesian future *mau* can be used in dispositionals:

(38) *Does Budi eat fish?*
Budi mau makan ikan.
Budi FUT eat fish
'Budi will eat fish.'

Even though these examples suggest the presence of a covert conditional, this analysis is not going to work for most of our examples. Instead, what is required for future *mau* to be licensed is that its subject is disposed to causing its prejacent. We model this in terms of *dispositional causation*, a notion formalized in Copley (2018). Adapting this to future *mau*, we argue that its subject is disposed towards the proposition in its prejacent. More formally:

(39) The subject x of future *mau* is disposed towards the future proposition p.
a. x is the holder of a state e
b. e is a state that directly causes e', *ceteris paribus*
c. e' instantiates p
d. x is disposed towards p



We will thus say that the subject of future *mau* is disposed towards p if it is in a state that can directly cause another state, instantiating p. For example, in the case of the book in (29), the subject of future *mau* is the book. The latter is in the state of being at the edge of the bookshelf, which can directly cause a state of falling, instantiating the future event. In other words, the state *e* the subject is in is what our consultant intuitively calls the "signs" for the future event.

Having defined what we mean by x is *disposed* towards p, we can now formalize the presupposition of future *mau*. Following the 'will as modal' approach (Thomason (1970) a.o.), the future meaning of regular 'will' *bakal* is contributed by a prospective aspect (Bochnak 2019). The lexical entry of 'will' universally quantifies over accessible worlds as in (40b). It is in combination with the prospective aspect in (40c) that we get future time reference.

(40)a. ... [bakal [PROSP[VP]]]
b. $[\![\textit{bakal}]\!] = \lambda P_{i,st}.\lambda t.\lambda w.\forall w' \in \text{ACC}(w,t)[P(t)(w')]$
c. $[\![\text{PROSP}]\!] = \lambda Q_{v,st}.\lambda t.\lambda w.\exists e[\tau(e) > t \;\&\; Q(e)(w)]$

Under this approach, given that *bakal* itself is a modal, it is conceivable that another modal such as future *mau* could replace it under certain circumstances. We propose that *mau* is ambiguous between a desire *mau* meaning 'want', mau_1 (also spelled out as *pengen*), and a future *mau* meaning 'will' mau_2, which is a modal (Copley 2002, 2010; Sneddon 2010; Jeoung 2020). Future mau_2 is a specification of *bakal*, taking an additional subject argument, which needs to satisfy its dispositional presupposition:

(41)a. ...[mau...[PROSP[VP]]]

b. $[\![\ \textit{mau}_2\ ]\!] = \lambda P_{i,st}.\lambda x.\lambda t.\lambda w.\forall w' \in \text{ACC}(w,t) : \underline{x \text{ is disposed towards } P}.\ P(t)(w')$

Although we have to posit ambiguity between a future *mau* and a desire *mau* as we saw in (8a), this is clearly not the *bank*$_1$/*bank*$_2$ kind of ambiguity. Indeed, there are many similarities between future and desire *mau*. *Mau*$_1$ quantifies over buletic alternatives, while *mau*$_2$ quantifies over accessible worlds. It also seems plausible that the 'desire' component of *mau*$_1$ has been turned into the dispositional presupposition of *mau*$_2$. In other words, the quantification over buletic alternatives of an attitude holder gets bleached to quantification over accessible worlds. What used to be the attitude holder is now the subject that is disposed towards the prejacent of future *mau*. A subject being disposed towards a proposition is the closest we can get to 'desire' at the absence of an animate attitude holder. Synchronically, however, we have to posit ambiguity, leaving the connection between the two *mau*s for future research.

Given that future *mau* is a specification of *bakal* with an additional presupposition, we predict *Maximize Presupposition!* (Heim 1991) effects. In other words, when the presupposition of future *mau* is satisfied we predict *bakal* to be less felicitous. Indeed, this prediction is borne out when there are too many "signs" for the future event:

(42) *I am cooking pasta. The water is boiling, and the lid is shaking.*
Air=nya mau/#bakal meluap.
Water-DEF FUT overflow
'The water will spill over.'

(43) *I'm in the train station and I hear the train whistle.*
Kereta=nya mau/#bakal datang.
train-DEF FUT come
'The train is about to arrive.'

We have modeled the dispositional requirement on future *mau* in terms of a presupposition, but we have not yet explained its PPI-hood. How can we account for the incompatibility of future *mau* with clausemate antilicensers? Ideally, we should provide an explanation on a par with other PPIs (Van der Wouden 2002; Szabolcsi 2004; Nicolae 2012; Iatridou and Zeijlstra 2013; Spector 2014; Homer 2015; Zeijlstra 2017), suggesting that at the presence of an antilicenser, if we exhaustify all stronger alternatives, we get a contradictory meaning. However, it is unclear what would count as a stronger alternative in the case of future *mau*. For the moment, we leave the puzzle open for future research. Assuming NEGP is above the VP (Kroeger 2014), if there are two adjunction sites for modal auxiliaries like Cormack and Smith (2002) propose for modals, we have the following structure:

(44) ...[T ✓bakal / ✓mau...[NEG nggak ...[TAM ✓bakal / ✗mau...[VP...]]]]

Given the PPI-hood of future *mau*, it cannot scope below negation, and thus can only adjoin at T. This would predict that only *mau*$_1$, also spelled out as *pengen* and situated at V, can be targeted by negation, which in turn explains why *nggak mau* can only mean 'not want'. But this also predicts that future *mau* should be acceptable in the higher adjunction site, even at the presence of a clausemate negation targeting the main verb. This prediction is borne out, since we can use future *mau* with a negated main verb:

(45) *I had a dentist appointment, and he told me not to drink anything with color today except water.*
Aku mau nggak minum teh nanti.
I FUT NEG drink tea later
'I plan not to drink tea later.'

We have thus proposed that *mau* is ambiguous between a desire verb and a future modal, and we characterized the latter as a specification of modal 'will' carrying an additional presupposition about the subject's dispositions. We also identified a puzzle, since future *mau* behaves like a weak PPI. Finally, assuming two adjunction sites for modal auxiliaries, we correctly predicted future *mau* to be able to combine with a negated main verb.

6. Conclusion

This paper investigated the semantics of *mau* 'want' as a future modal, identifying two novel empirical generalizations. Firstly, we argued that future *mau* behaves like a weak PPI in that it does not tolerate clausemate c-commanding antilicensers. Secondly, we showed that the distribution of future *mau* is more restricted than that of the regular future marker *bakal*. We proposed to explain the difference in terms of dispositional causation, arguing that the subject of future *mau* is presupposed to be disposed towards the future proposition. We showed that this correctly predicts Maximize Presupposition effects arising between *mau* and *bakal*. Many interesting puzzles remain open for future research, such as the explanation behind *mau*'s PPI-hood, and the diachronic connection between future and desire *mau*, which is attested in many languages (e.g.,Bybee and Pagliuca (1987); Bybee and Dahl (1989); Nesselhauf (2012); Heine (2017) a.o.). Indonesian shows that desire verbs can synchronically be future modals, eliminating the need for an attitude holder.

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