

# Apprehensives in Australia: morphology, syntax, semantics and pragmatics

## *A survey and some tentative analyses*

LAL Seminar, 18. July 2023, SOLL, U. Melbourne

Patrick Caudal, CNRS/LLF (UMR CNRS 7110) & U. Paris-Cité  
pcaudal@linguist.univ-paris-diderot.fr



Université  
Paris Cité

# Introduction

- **Apprehensives (or apprehensionals, or aversives, or *lest* clauses/constructions) « appréhensionnels »**: detrimental possibility (cf. Engl. *for fear that + <should>*)
  - **Negative evaluation (undesirable) of some possibility; doxastic/predictive flavour**
  - Often appears within an expressive context
    - Matrix, single clause uses: *pragmatic* priority/directive function (Portner 2018) can appear (François 2022)

(1) *k-ini-majpungku-n,*                      *marnti*    *kurruni-wu-n.*                      (Mawng)  
PR-3MA/3MA-lift.up-NP                      APPR                      3MA/2PL-kill-NP  
'It [the sea] is rough and it might kill you.'                      (Singer 2006: 171)  
(implicated directive: 'you shouldn't canoe / don't canoe')

# Introduction

- So-called apprehensives in Australia were identified a while ago, and are attested in numerous languages on the continent
- But apprehensivity remains understudied descriptively, typologically and formally/theoretically
  - i.e., no general or areal typological work on apprehensives yet (nothing like McGregor (2023) or Caudal (2023)) – some unpublished talks though (Vuillermet 2017, Evans 2022, a.o.)

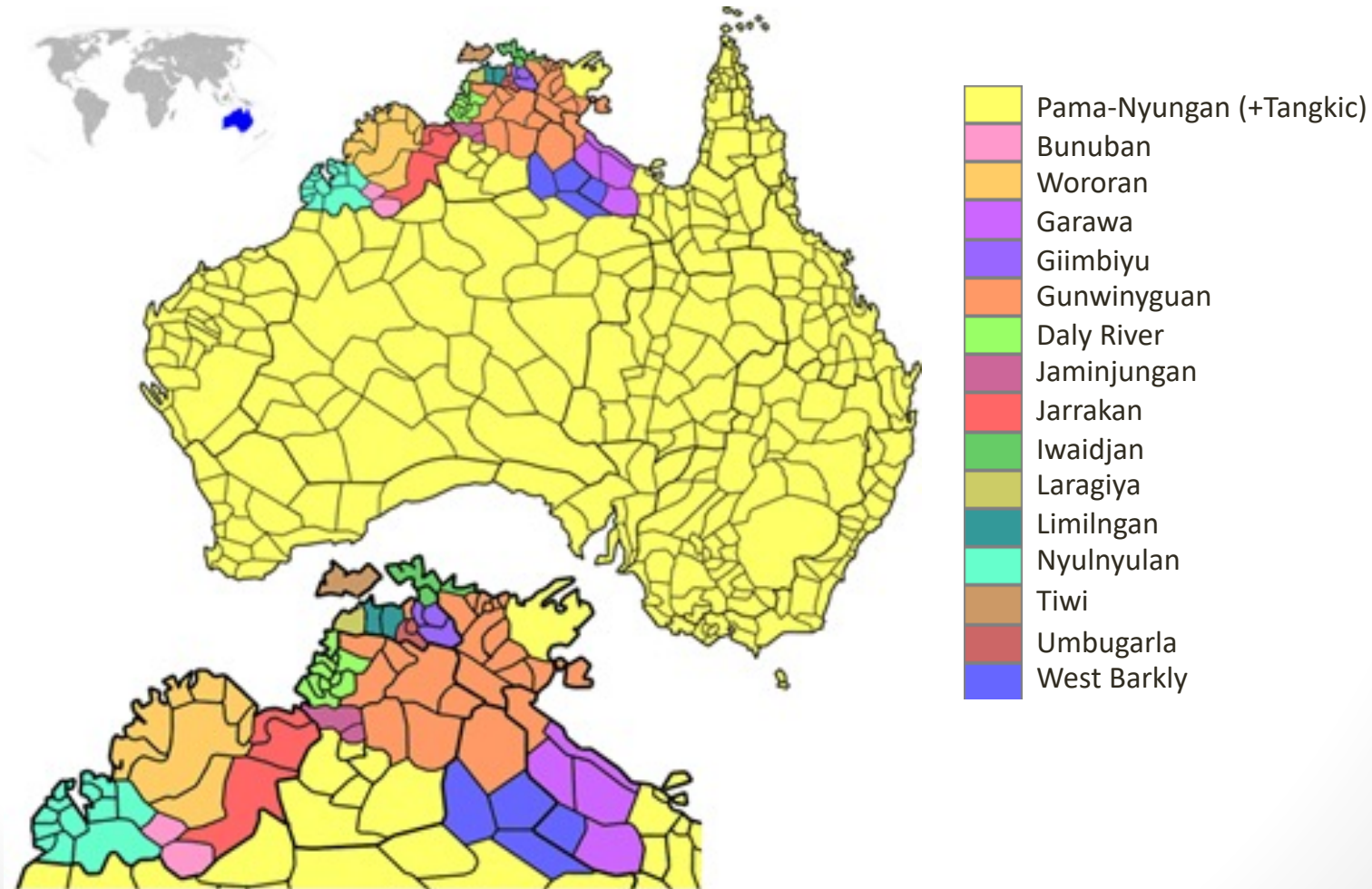
# Introduction

- A relatively limited number of theoretical, pre-formal works on various languages: François (2003), Pakendorf & Schalley (2007), Schultze-Bernd & D'Angelo (2016), Vuillermet (2017), Smith-Dennis (2021), François (forthcoming), (Browne, Ennever & Osgarby forthcoming) -- in Schultze-Berndt & Vuillermet (eds.) (forthcoming) ...
- only existing formal implementation is Tahar (2021)
  - **BUT about some French apprehensive verbal constructions – very unlike (Australian) *grammatical* apprehensives**

# Introduction

- **Objective of this talk:**
  - Provide a reasonably **empirical portrait of apprehensivity** in Australian languages (areal typology + fieldwork)
    - Empirical generalizations w.r.t. form/meaning pairings: from morpho-syntax to semantics and pragmatics)
  - Sketch some **tentative theoretical/formal accounts of the category in Australian languages**, capitalizing on existing accounts of apprehensivity (and modals in general)

# Introducing apprehensives in Oz



# Introducing apprehensives in Oz

- In contrast, in many biclausal constructions, directive meaning explicitly co-exists with apprehensive meaning: ‘double modal’ constructions
  - Directive modal clause(order/instruction) + apprehensive modal clause (‘lest clause’) :
  - Undesirability not a defeasible, contextual implicature in semanticized apprehensives (not so in ‘apprehensive strategies’ – more on that later)
- Turned out to be very common in field data in Iwaidja:

(2) *Kana-ya-njing,* *that nagi* (Iwaidja)  
2sg>3Obj.RMOD-look-RMOD that dog

*ri-mambu-∅* *ba arijumardan!*  
3sg>3Obj.APPR-bite-APPR the child!  
‘Watch out, that dog might bite the child!’  
(TAIM190603MM\_Modality\_1, 00:47:15)

# Introducing apprehensives in Oz

- **Oz modals are often variable force modals**
  - True of APPR as well: weak OR strong doxastic ('might kill you' or 'will kill you')
  - **Caveat:** some fixed force readings with certain flavours, esp. In certain constructions/markings (ex. : prohibitives)
- A lot of discontinuous exponency (Booij 2010, Carrol 2016...)
  1. As in periphrastic morphology, lots of preverbal/postverbal modal particles
  2. As in complex, distributed exponence as found in nPN polysynthetic lgs



# Introducing apprehensives in Oz

- Diachronic morphological cycles from 1 to 2 (Osgarby 2018)
  - Common pathways:

1.  $V \quad AUX/PART_{MOD}-(TA_1) \quad > \quad V-TAM_1$
2.  $AUX/PART_{MOD}-(TA_1) \quad V-TAM_2 \quad > \quad TAM_1-V-TAM_2$

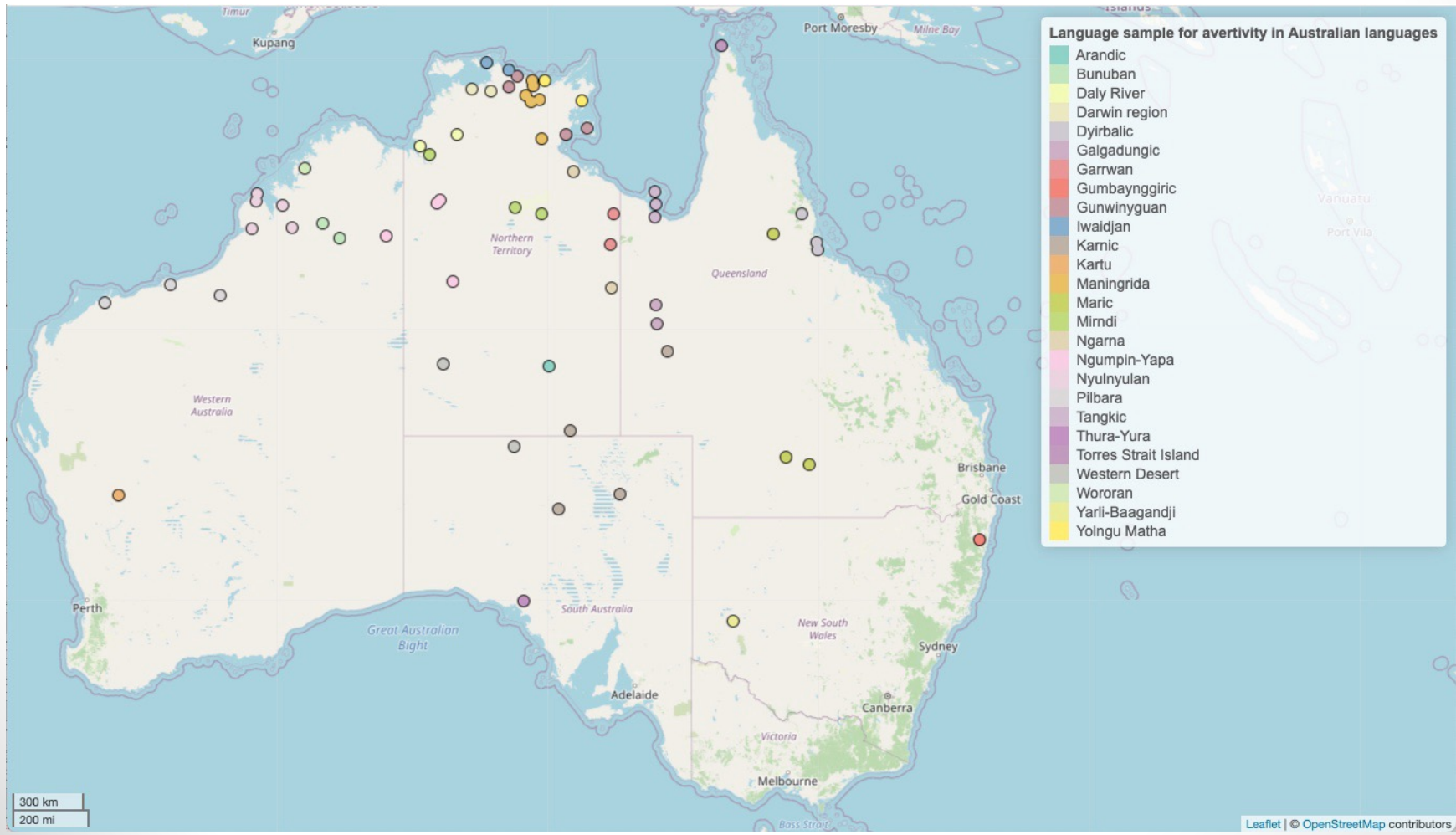
# Research questions

- **Typological profile of apprehensivity in Australia?**
  - **Morphosyntactic inventory**
  - **Semantics or pragmatics?**
    - When semantic: what kind of form is involved? (form meaning/pairing)
  - **[Lexical/grammatical sources]**
    - What are the development paths of these categories in Australia?
- **How to model the negative (undesirability) meaning of apprehensives ?**
  - Pragmatically construed (implied) or semantically encoded?
    - *Where* and *how* should we represent it as part of logical form? (à la Recanati)

# Empirical portrait of apprehensives in Oz

- First empirical method behind present work:
  - Areal typological approach: grammar mining
    - AustrILS project; **collaborative research**
      - Aim: 70+ language sample
    - Tense, aspect, modality, evidentiality; phonetics & phonology
    - Currently: 26 languages for apprehensives
  - Data base of glossed, transcribed & annotated examples (tagset built upon a hierarchical structure, to allow for both language comparison AND language specificity, polyfunctional categories...)
    - Grammatized apprehensives found in 25 languages out of 26

# Empirical portrait of apprehensives in Oz



# Empirical portrait of apprehensives in Oz





# Empirical portrait of apprehensives in Oz



# Empirical portrait of apprehensives in Oz

- **AustrILS: (Atlas of) Australian Indigenous Language Structures**



- 70 Australian languages
  - 26 language families/groups
  - 10 non-Pama-Nyungan families/groups  
(Iwaidjan, Gunwinyguan, Mirndi, Worroran, Maningrida, Gaagudju, Darwin Region, Daly River, Nyulnyulan, Tangkic)
  - 16 Pama-Nyungan families/groups  
(Western Desert, Arandic, Ngumin-Yapa, Pilbara, Yolngu Matha, Ngarna, Maric, Karnic, Bunuban, Gumbaynggirc, Galgadungic, Kartu, Dyrbalic, Yarli-Baagandi, Thura-Yura, Garwan)

# Empirical portrait of apprehensives in Oz

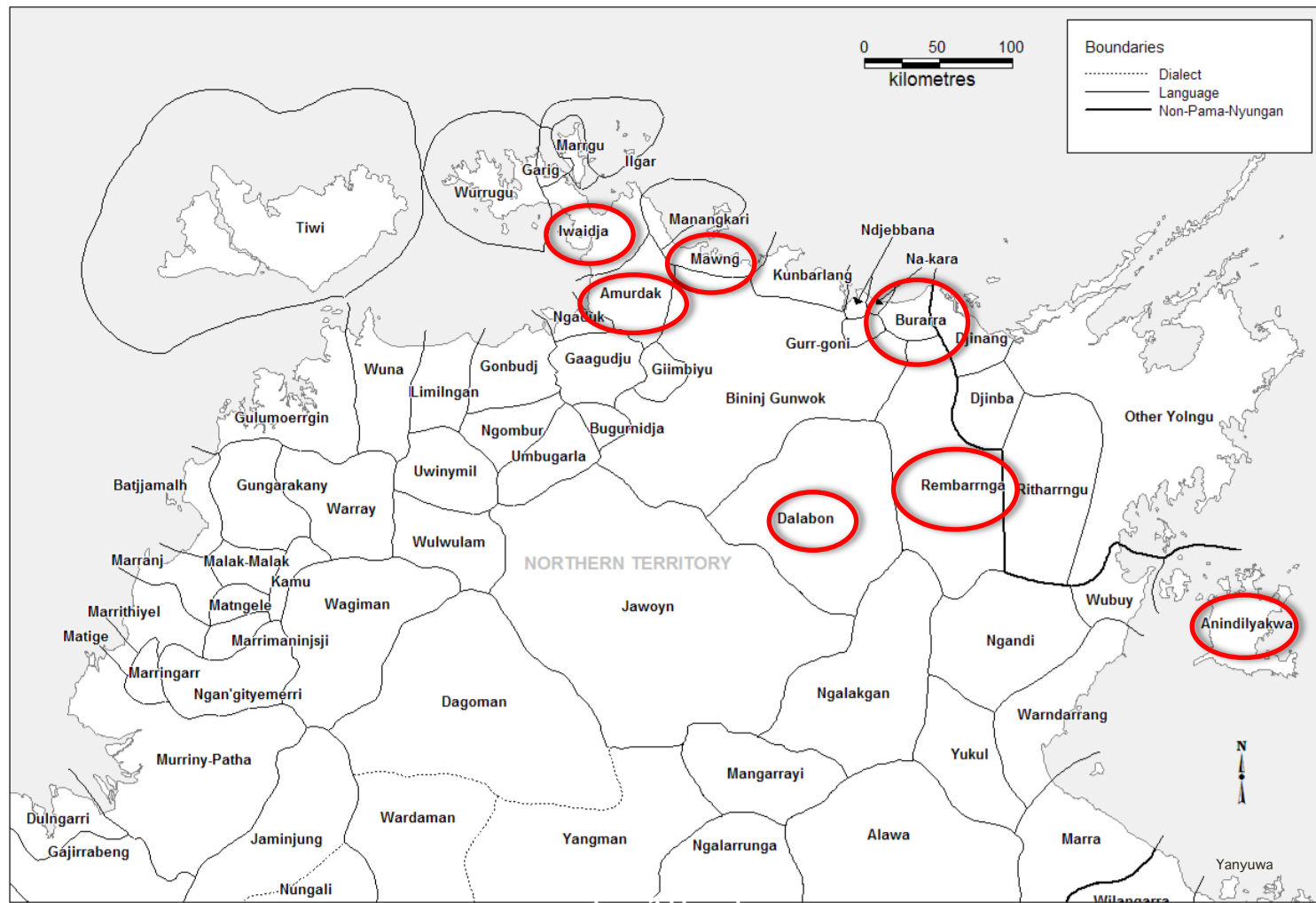
- Second empirical method behind this research: qualitative semantic elicitation fieldwork (controled data)
  - **Goal:** mitigate and control shortcomings of grammar mining
- Translation questionnaires, retrotranslation, acceptability judgements
- Elicitation tasks using 3D storyboards (cf. Ana Krajinović's work) using figurines and toys (human and local animals)
  - Found this to be more 'engaging' than 2D storyboards
  - Also 2D can be problematic in languages encoding directionality in their morphology (distal/proximal/neutral)
  - Allows for 'on the fly' corrections if some problem occurs
- **Iwaidja, Mawng, Amurdak, Anindilyakwa, Dalabon** (R. Mailhammer, J. Bednall, M. Ponsonnet)
- **Burrara, Rembarrnga** (D.F. Guerrero-Beltran, M. Legentil)



# Empirical portrait of apprehensives in Oz

- Second empirical method behind this research: qualitative semantic elicitation fieldwork (controled data)
  - **Goal:** mitigate and control shortcomings of grammar mining
- Translation questionnaires, retrotranslation, acceptability judgements
- Elicitation tasks using 3D storyboards (cf. Ana Krajinović's work) using figurines and toys (human and local animals)
  - Found this to be more 'engaging' than 2D storyboards
  - Also 2D can be problematic in languages encoding directionality in their morphology (distal/proximal/neutral)
  - Allows for 'on the fly' corrections if some problem occurs
- **Iwaidja, Mawng, Amurdak, Anindilyakwa, Dalabon** (R. Mailhammer, J. Bednall, M. Ponsonnet)
- **Burrara, Rembarrnga** (D.F. Guerrero-Beltran, M. Legentil)

# Empirical portrait of apprehensives in Oz



# Empirical portrait of apprehensives in Oz

- Syntactically, two main types of apprehensive clause structures were found in the sample:
  1. **Simple matrix clause uses**, with a single clause P:
    - a. P-predictive uses ('(careful/beware) might/will Pundesirable')
    - b. P-prohibitive uses ('don't you (dare) do Pundesirable')
  2. **Complex, biclausal uses**, by far the most common, associating two clauses P and Q:
    - a. P-directive + Q-predictive ('you (must/should) P, or else might/will<sub>undesirable</sub> Q')
    - b. P-prohibitive + Q-predictive ('don't P<sub>undesirable</sub>, or else might/will<sub>undesirable</sub> Q')
    - c. P-hypothetical + Q-Predictive structures ('if P<sub>undesirable</sub>, then will<sub>undesirable</sub> Q')

# Empirical portrait of apprehensives in Oz

- **Hypothetical constructions:** warnings, threats

(3) *ɲinda*                      *ɲaygu*    *bulgugu*                                      (Dyirbal)  
you-SA I-GEN              wife-DAT swive-ŊAY-REL-NOM

*wadilɲaɲu*              *ɲada*    *ɲinuna maɲa*              *gunbal-bila*  
I-SA                      you-O    ear-NOM                      cut-APPR

‘If you swive my wife, I’ll cut off your ears.’ (Dixon 1972: 362)

# Empirical portrait of apprehensives in Oz

- **Mixed directive+apprehensive biclausal constructions**
  - Known as ‘pseudo-imperatives’ ’) (Fraser 1969, Clarke 1993)
  - Starr (2020): negative conditional meaning (‘if you don’t conform to directive A, then B’)
  - Lichtenberk (1995), Vuillermet (2017): ‘precautining clause’

(4) *ŋinda*                      *balan*                      *buni*                      *muymba* (Dyirbal)  
you-SA                      THERE-NOM- I1    fire-NOM                      put.out-IMP  
*baijgun*                      *dambundu*                      *bural-bila*  
there-ERG-I1                      dambun-ERG    see-**APPR**  
‘You put out the fire lest the Dambun spirit sees it (i.e. and comes to torment us).’                      (Dixon 1972: 113)

# Empirical portrait of apprehensives in Oz

- **Some APPR can have both directive and predictive readings as matrix:**
  - **Directive meaning require overt negation (prohibitive modal)**
  - Complementary of example (1), directive (not predictive) is implicated
  - Implied meaning is a sort of conventional implicature (non-defeasible)
    - **Caveat:** Cliticised SVC construction =*thurru* ('keep on') differs from *thurru* verb

(5) *mere na-ngi-mathputh-nukun=thurru* (Murrinh-Patha)

NEG 2SGS.HANDS(8).FUTIRR-ISGO-interrupt-**APPR**=2SGS.GO(6)[KEEP.ON].FUTIRR

'Don't you continually interrupt me.' (>Implicit threat: 'or I'll punish you')

(Nordlinger & Caudal 2012:104)

- Some intricacies : cf. Mansfield (2014:446) =*nukun* (APPR) attaching to negation
  - Proof of original status as a clitic?

(6) *mere=nukun*                      *thurru*  
NEG=**APPR**                              2SG.GO(6).FUTIRR  
you better not go!

# Empirical portrait of apprehensives in Oz

- **Some forms can have both directive/priority and doxastic flavour:**
  - **Overt negation must be involved; prohibitive modal**
  - Complementary of example (1), where directive content is pragmatic
  - Implicative meaning is a sort of conventional implicature (non-defeasible)
  - Also: expressive, threatening content; **phonological cues**
    - **Caveat:** Cliticised SVC construction =*thurru* ('keep on') differs from *thurru* verb

(7) *mere na-ngi-mathputh-nukun=thurru* (Murrinh-Patha)

NEG 2SGS.HANDS(8).FUTIRR-LSGO-interrupt-APPR=2SGS.GO(6)[KEEP.ON].FUTIRR

'Don't you continually interrupt me.' (>Implicit threat: 'or I'll punish you')  
(Nordlinger & Caudal 2012:104)

# Empirical portrait of apprehensives in Oz

- **Apprehensive clitics in sample: Anindilyakwa, =*maka* (Bednall 2020:97)**
- In addition, =*maka* seems to have developed admonitive uses:
  - Negative preference, BUT about implied negative event ('he did not hit him on the head')

(8) *n-akəna kenu-warda-ng=maka arung=manja* (Anin.)  
3M-that IRR.3M>1-hit-PST=EVIT NEUT.head=LOC  
'He should have hit me on the head' [author translation; prompt:  
'He should have hit me on the head']<sup>105</sup> (JL, ANI\_2016-07-06\_02,  
00:21:23-00:21:27) (Bednall 2020:296)



# Empirical portrait of apprehensives in Oz

- Another possible clitic in Murrin-Patha – or rather a former clitic having undergone morphologization, except in a few residual cases: *-nukun/=nukun* can also have a predictive-apprehensive reading

(9) *ke-nhi-bath-nukun!*

3SGS.POKE:RR(21).FUTIRR -2SGO-cook-APPR

‘It might burn you!’ (RN 20070608-002:035) (Nordlinger & Caudal 2012:84)

(10) *ma-ni-ŋka-tum-nukun*

do.3SG.NFUT-2SG.OBJ-eye-dry-APPR

‘you might get hazy vision’ (Mansfield 2020:208)

# Empirical portrait of apprehensives in Oz

- Empirical generalisation: *nukun* can trigger both directive and predictive readings
  - *NEG V<sub>subject-controlled</sub>-nukun* > prohibitive (« don't P<sub>undes</sub> »)
  - *V<sub>non-subject-controlled</sub>-nukun* > predictive-apprehensive (« might P<sub>undes</sub> »)
- Suggests that 'dispreferencel', negative modal content needs not project into a volitional/deontic/directive meaning

# Empirical portrait of apprehensives in Oz

-  **Postmodal uses attested** – effective and undesirable events

(11) *ngayu bama wawa:l wandanḍinggu.* (Yidiny)  
I-SA person-ABS see-PAST fall-**APPR**-ERG

‘I saw the person as I was **(unfortunately)** falling over’.  
(Dixon 1980:352)

# Empirical portrait of apprehensives in Oz

- **Synthetic vs. periphrastic marking:**

- *Bambai* Kriol particle, has been incorporated in several Indigenous languages as a novel periphrastic apprehensive-making morphological element

(12) *Burrb ya-rri-minda=burri mangarra.*  
finish IRR-2PL>3SG-eat=3PL plant.food  
"You might eat up all the food on them. »

*Thet min, bambai yu finish-im taka fo MAI femili.*  
that mean APPR 2SG finish-TR food for my family

"That means, you might finish the food (that was) for MY family."  
(Jaminjung and Westside Kriol; staged conversation; IP, ES96\_A08\_02.073)  
(Schultze-Berndt & D'Angelo 2016)

# Empirical portrait of apprehensives in Oz

- **Multiple inflectional means: Kayardild**
  - Kayardild has the most complex apprehensive system in sample
    - Modal agreement is very frequent (not mandatory), esp. Object
  - Related pattern in Yandruwandha: nominal APPR –*puru* (+ APPR verbal inflection -*yi*)
  - + *nginja* ‘would not’! (negative purposive)
- X V-*nyarr* : apprehensive inflection
- X V-*nyarr* Y-MPROP (propriative case)/MOBL (oblique case) in the regular case
- X V-*nyarr* Y-MLOC (locative case) if actual undesirable event

(14) *Nyingka ngudi-na* *wangalk,* (Kayardild)  
youNOM throw-NEG.IMP boomerangNOM  
*ngada ngumban-ju* *burldi-nyarr.*  
1sgNOM you-MPROP hit.by.throwing-APPR  
'Don't you throw the boomerang, or I'll throw (one) at you.'(Evans 1995:3)

# Empirical portrait of apprehensives in Oz

- **Multiple means inflectional means: Kayardild**

- Concurrent periphrastic construction with preverbal apprehensive particle 'bambay/baymbay' (loanword from Kriol; also found in many non-Australian Creoles, see Schultze-Berndt & D'Angelo 2016)

(15) *baymbay nyingka ra-yii-j, kamarr-ii-wa-th*  
*APPR 2sgNOM spear-M-ACT stone-VALL-PST*  
'You might get stung by a stonefish.' (Evans 1995:388)

- Traditional Kayardild equivalent (APPR modal agreement *-nharr* on N; can also appear with *bambay!*)

(16) *nyingka ra-yii-nyarr, kamarr-ii-wa-nharr*  
*2sgNOM spear-M-APPR stone-VALL-APPR* (Evans 1995:388)  
'You might get stung by a stonefish.'

# Empirical portrait of apprehensives in Oz

- **Also apprehensive strategies** (typically with simple IRR marking)
  - Undesirability is then contextually determined, not always linguistically marked (matter of world-knowledge and common sense reasoning)
  - *Yama=lhangwa*: optional warning expression, separate intonation unit, NOT an apprehensive particle (unlike e.g. *bambay*)

(17) (*yama=lhangwa!*) *n-ak* *nenəŋkwarba* (Anindilyakwa)

(watch.out=ABL) 3M-that

3M.man

*kənə-wənyamba-dhu-∅=ma*

IRR.3M-angry-INCH-USP=MUT

‘Watch out! The man might become angry!’ (Bednall 2020: 328)

(no inflectional apprehensive, nor apprehensive particle)

# Empirical portrait of apprehensives in Oz

## Summary of findings in sample

- **Extreme diversity of formal marking**
- Form – obvious development path:
  - Form : particle > clitic > morph (classic morphological cycle in Australia, cf. Osgarby 2018)
- Meaning:
  - Implied meaning > semanticized  
(conversational>lexical>semanticised?)
    - Lexical sources:
      - Temporal-predictive adv (future tempora): *baymbay* < *by and by*
      - Causal-temporal connectives: Wambaya: *ngabayi* < *ngaba* ‘so, then’
        - Reconstruction needed for many non-transparent items



# Why apprehensives are scalar expressions

- **D'Angelo & Schultze Berndt (2016):**

*The function of bambai, in our analysis, is to flag proposition  $q$  as possible and undesirable (...).*

- Desirability : scalar concept

# Why apprehensives are scalar expressions

- Obvious requirement for doxastic meanings in apprehensive structures: we want some notion of gradable *doxastic* content – not the simple negation of a proposition
  - Apprehensive doxastic modals are not *binary*; they can encode concerns, preoccupations, or fears – cf. e.g. Tahar (2021), Evans (2022)
  - COMPARISON essential to defend degree analysis (see IRR in BNG)

# Formal analysis for semantic avertives

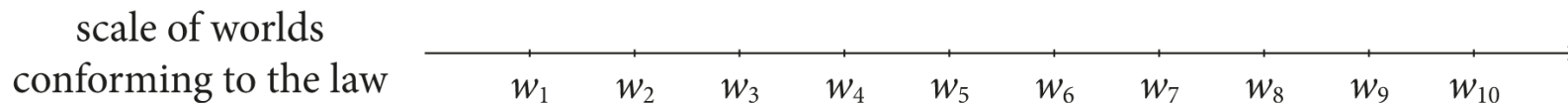
- **Modals are scalar expressions:** Lassiter (2010, 2014, 2017), Klecha (2014), Bowler & Gluckman (2021)...
  - English: lexicalises force (strong vs. weak), rather than flavour (although some modals are less polyfunctional than others...)
  - Australian languages: lexicalise flavours (at least to some extent), but not force ('Variable force modals', cf. [Matthewson 2008 ???](#), [Bochnak ???](#))
- **General intuition:** APPR denote negative modals in that they involve an undesirable possibility
  - Proposal: can be modelled as **negative scalar** 'preference/priority' modals for imperative/deontic-looking avertive clauses (Condoravdi & Lauer 2011, Portner 2018)
    - OR negative scalar doxastic modals for 'might' avertives

# Formal analysis for semantic avertives

- Formal approaches to modals:
  - Kratzer (1991): modal bases (= modal flavours: deontic/epistemic...) vs. ordering sources (= ordering of possible worlds)
  - Ordering sources are kind of a scalar: i.e. for volitional modals, ordering source will rank possible worlds in terms of similarity to speaker's preferences ('ideal world')
  - Lassiter (2014) vs. Rubinstein & Portner (2016): one vs. two ordering sources

# Formal analysis for semantic avertives

- Lassiter (2014) vs. Rubinstein & Portner (2016)
  - Lassiter: modals are inherently scalar, and ordering sources provide a scale on which a modal is located; total ordering of worlds (= possibilities)



- Rubinstein & Portner (2016): second ordering source to reflect on the fact that e.g. *should* indicates that the speaker ‘leaves some room’ for addressee’s desires/beliefs – ordering is always **relative** to the speaker’s ordering source and the addressee’s ordering source

# Formal analysis for semantic avertives

- **Tahar (2020):** *craindre* ('fear') apprehensive = doxastic apprehensives with as *gradable* alternatives  $p$  &  $q$  ( $p$  has a very low desirability when compared to contextual alternatives  $q$ )

(18)

$\llbracket \textit{craindre} \rrbracket = \lambda a. \lambda p. \lambda w.$

- Doxastic meaning:**  $\exists w' \in \text{Dox}_a(w): p(w')$
- Undesirability meaning:**  $\forall w' \in \text{Dox}_a(w): \forall q \in C \rightarrow q \neq p:$   
 $\exists d[\text{Desirability}(\text{Sim}'_{w'}(q)) \geq d \wedge \neg \text{Desirability}(\text{Sim}'_{w'}(p)) \geq d]$

# Formal analysis for semantic avertives

- Tentative implementation à la Lassiter (no need for lexicalizing force, BUT additional degree argument for contextual interpretation would be required)
- Doxastic apprehensives:

$$\llbracket APPR_{predict} \rrbracket = \lambda a. \lambda p. \lambda w. \exists w' \in Dox_a(w) [\text{Desirability}(\text{Sim}'_w(p)) \geq d \wedge d \in S_{APPR} \wedge \text{NEG}(S_{APPR})]$$

- Deontic apprehensives can be formalized similarly

# Dynamic pragmatics for 'avertive strategies'

- Dynamic pragmatic context à la Portner (2018:305) ( $p$ : participant;  $cs$ : commitment slate;  $cg$ =common ground;  $tdl$ =to-do-list;  $IC$ : individual commitments;  $MC$ : mutual commitments:  $PC$ =projected commitments – i.e., anticipated developments of conversation)

(19) A context is a tuple  $\langle MC, IC, PC \rangle$ , where:

1.  $MC = \langle cg, tdl \rangle$
  2. For each participant  $p$ ,  $IC(p) = \langle cs_p, tdl_p \rangle$
  3.  $PC = \langle pc_{cg}, pc_{tdl} \rangle$
- Given a some directive content  $\phi$  (order or request), variable force is treated by adding modalized proposition  $\phi$  to either :
    - $tdl_{addressee}(addressee)$  (**weak priority/directive**: proposes the addressee's commitment to treating  $\phi$  as a priority)
    - $tdl_{speaker}(addressee)$  (**strong priority/directive**: proposes the speaker's commitment to treating  $\phi$  as a priority)



# Dynamic pragmatics for 'avertive strategies'

- **'Semantic' approach does not apply to:**
  - Apprehensive strategies, i.e. averting readings pragmatically construed for otherwise non-apprehensive-denoting modals
    - Also true of apprehensive 'implicature' associated with monoclausal apprehensives, whether deontic or doxastic:

(20) *The sea might be rough* (> Don't canoe!)

(21) *Don't you (dare) eat my food!* (> or I'm going to punish you)

- **Framework:** so-called 'dynamic pragmatics', with *commitment slates* à la Condoravdi & Lauer (2011) or Portner (2018)

# Dynamic pragmatics for 'avertive strategies'

- Given some undesirable proposition  $\phi$ , could we update relevant *tdl* with  $\neg \phi$  to account for directive interpretations?
  - Would prompt addressee to act so as to realise  $\neg \phi$
  - But that's not what we actually need
  - Instead, addressee should be prompted to act so as to *prevent*  $\phi$  (which may involve a number of fairly different actions)
- And recall that we want some notion of gradable *doxastic* content – not the simple negation of a proposition

# Dynamic pragmatics for 'avertive strategies'

- Solution #1: introduce *negative* slates for priority effects of apprehensives (i.e. implied orders/requests)
  - Introduce a *ntdl* 'not-to-do-list'
  - Introduce a *ncs*, a 'negative commitment slate', to indicate that some agent considers a proposition as pointing to an undesirable potentiality (one that should be avoided)
- Cons:
  - Looks *ad hoc*, as we would also need negative and positive doubling of other mechanisms to account for e.g. predictive, doxastic meanings
  - How to account for variable force effects?

# Dynamic pragmatics for 'avertive strategies'

- Solution #2: make dynamics pragmatics model scalar *and* polar
- Commitment slates/to-do-list etc. should be updated with *pairs*  $\langle \phi, d_S \rangle$ , not 'bare' propositions
  - Degree of desirability  $d$
  - Positively or negatively oriented flavour scale  $S$ 
    - Doxastic scale
    - Priority scale (Potential issue: prohibitives tend to have 'strong' force)
    - (Circumstantial scales too, as we have negative capacity modals)
- Maybe expand projection principles of commitments to adapt them to negative scales.

# Conclusion

- Implications identified for positive preference modals and positive directives (positive imperatives) (see e.g. Portner 2018) hold for negative preference modals and negative directives (Cf. *-nukun/=nukun*)
  - ‘negative preference modals’ *implicates* ‘negative directive’ (DISP>PROH)
  - ‘negative directive’ *implicates* ‘negative preference modal’ (PROH>DISP)
  - ‘positive preference modals’ *implicates* ‘positive directive’ (PREF>IMP)
  - ‘positive directive’ *implicates* positive ‘preference modals’ (IMP>PREF)

# Conclusion

- Great formal and semantic variety found in Oz apprehensives
- We need to expand our model of dynamic pragmatics to account for undesirable possibilities
- Negative modals have implicative patterns similar to those of positive modals
- Some apprehensive forms can surface as directives rather than predictive/doxastic modals
  - Suggests that some kind of symmetry is at play here:
    - Directive > predictive is implied
    - Predictive > directive is implied

# Conclusion

- Open issues:
  - Implicative meanings : conventional, lexical, conversational ?
    - **Actual undesirable event readings**
  - Sparse + second hand data problem did arise!
    - *Yandruwandha*: -*yi* –POT given as apprehensive in Green (2004)
    - And yet one positive/desirable context is attested in the grammar!
    - But what is -*yi*? An IRR inflection capable of apprehensive strategies?  
Some apprehensive with vestigial positive uses?
  - **Mitigation/control strategies are essential**

# Conclusion

- Open issues:
  - Negative purposives > apprehensives
  - Prohibitives > apprehensives
- Variable force?
  - Not so clear: negative deontic apprehensives, especially monoclausal ones, appear to only have strong force ('don't you dare!')
  - Seems possible that doxastic modals and deontic/directive modals align in terms of force
    - Strong doxastic APPR (Stern warning) > strong deontic APPR
    - Weak doxastic APPR > weak deontic APPR



# Conclusion

- Similar phenomena are found in regular SAE languages:
  - Matrix undesirable possibility (with an implied consequent):

(20) *Si (jamais) tu (oses) V...* (apprehensive construction when special threatening intonation)

'If you (dare) V...'

- And conversely, we can have a matrix negative directive, with an implied negative doxastic consequent:

(21)	<i>Ne va</i>	<i>surtout</i>	<i>pas</i>	<i>V!</i>
	NEG go-PRS	especially	NEG	V

(22) *Don't you (dare) V!*

# Conclusion

- The following near equivalence also holds

(23) *I'll whip you if you dare leave this house again!* (A. Miller, *The Crucible*, Act II)

(24) *Don't you (dare) leave this house again, or I'll whip you!*

(25) *Je te fouetterai si (jamais) tu quittes cette maison à nouveau!*

(26) *Ne quitte pas cette maison à nouveau, ou bien je te fouetterai.*

.

# Conclusion

- ‘Pseudo-imperatives’ incorporate a negative conditional operator
  - Hence some possible analogies, truth conditionally, with *bona fide* conditionals
    - (undesirable) hypothetical antecedent parallels a negative directive antecedent
    - ‘pseudo imperatives’ is a pretty bad label...

Prejacent		Consequent	
<b>¬DIRECT(P<sub>undes</sub>)</b> (‘prevent bad stuff P’)	<b>OR-ELSE</b>	<b>PREDICT(Q<sub>undes</sub>)</b> (‘bad stuff Q will happen’)	
<b>POT(P<sub>undes</sub>) / IF(P<sub>undes</sub>)</b> (‘should bad stuff P happen’)	<b>THEN</b>	<b>PREDICT(Q<sub>undes</sub>)</b> (‘bad stuff Q will happen’)	

# Conclusion

- See also François's (2003) « logical square of the evitative », and Vuillermet

Figure 1. Adapted from François' (2003:307) "*carré logique de l'Evitatif*"

