Revised modal questionnaire for cross-linguistic use

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Example of how to cite this questionnaire:

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Vander Klok, Jozina. 2022. Revised modal questionnaire for cross-linguistic use. http://tulquest.huma-num.fr/fr/node/70 (Accessed on DATE).

Notes for using this revised questionnaire:

- This revised modal questionnaire builds on the first modal questionnaire (Vander Klok 2014b), through new discourse contexts and expanding its coverage to additional modality types to encompass a wider and more inclusive typological perspective. Its goals and aims as well as the versatility in its implementation are the same as the original (cf. the discussion of how to use the original questionnaire in Vander Klok 2014a).
- Vander Klok (2022) is a paired resource that further explains the terminology in this modal questionnaire, and also brings together the results of a number of previous studies of the original modal questionnaire to explain the current expansion.
- This revised questionnaire is designed to be a fieldwork tool to investigate what might be the grammaticalized strategies of modal expressions in that language. For instance, does a given modal expression have the same grammaticalization for both modal force and modal flavour? for only modal force? for only modal flavour? for neither modal force or modal flavour? Some strategies could be, for example, lexical specification or underspecification, specific morphology, complementation strategies, the combination of a particle and mood, etc..
- Depending on the researchers' goals and timeline, this method can easily be paired with other fieldwork tools such as interviews, naturalistic recordings, or storyboards, etc. to corroborate the results of the questionnaire.
- The aim of this revised questionnaire is to provide discourse contexts that target one cross-section of modal force/strength (e.g. necessity, weak necessity, or possibility) and modal flavour (e.g. plain epistemic, deontic, circumstantial, teleological, and bouletic). It does not test for evidentiality or future modals, nor does it include how modal expressions may or may not overlap with mood (e.g., subjunctive, optative, imperative, etc.). Table 1 provides an overview.

Table 1. Overview of discourse contexts targeting specific modality types

	EPISTEMIC	ROOT / NON-EPISTEMIC			
		PARTICIPANT-EXTERNAL		PARTICIPANT-INTERNAL	
	Epistemic	Deontic	Teleological	Circumstantial	Bouletic
Necessity	5	4	4	4	3
Weak Necessity	3	3	3	--	--
Possibility	4	5	3	5	--

- The revised questionnaire also includes the *temporal perspective* (TP) and the *temporal orientation* (TO) of each of the target sentences, given the discourse context. Temporality in language interacts with modality in that the temporal perspective indicates the time at which the modal base is calculated (past, present, future), and temporal orientation, establishes the relation between the temporal perspective and the time of the event (Condoravdi 2002; Matthewson 2012). Since the main purpose of the questionnaire is not to research possible differences in TP and TO (across different modal flavours), I have simply identified the TP and TO so that the researcher is aware of possible temporal-modal interactions in the language under study.
- I have created most of the contexts; some contexts are adapted from the literature on modality. These references are indicated below.
- The questionnaire contexts are given in English; depending on your fieldwork situation, it will be necessary to translate the contexts into the object language. It is very important that the translation is culturally specific to the language being studied (see e.g., Matthewson 2004). As this questionnaire was originally designed for Javanese (Austronesian), you will have to change a number of lexical items (proper names, times, etc.) to make the contexts culturally relevant (see examples in Vander Klok 2022 from different languages). If you have translated the contexts, it is also important to conduct pilot tests beforehand to ensure that the main points of the contexts were not lost in translation.

Versatility of questionnaires
- The following are examples of the ways in which this questionnaire can be used:
  o elicitation with one or a small group of speakers
  o translation exercise (cf. Dahl 1985)
  o fill-in-the-blank (this requires knowledge of the morpho-syntax of the object language)
  o truth-value judgment task
  o felicity judgment task
    ▪ semi-forced choice task
    ▪ forced choice task
    ▪ rating task
- Following standard practices in experimental methodology, it is best to have fillers and practice examples in the implementation of the questionnaire.
- It is also ideal to be able to have feedback from the language consultants.
- Some contexts might not be as clean as possible; I would be very happy to hear of other construals, additional contexts, or comments on your experience in using these contexts. Please feel free to email me at: jozina.vanderklok@mail.mcgill.ca

Test items
- Each context is intended to target one cross-section of modality. In addition, many contexts can be directly contrasted with one type of modality or modal force/strength. The target cross-section is indicated in square brackets at the beginning of the context (e.g., [Target: deontic necessity], and if there can be a direct contrast, this is also indicated as, e.g., [vs. epistemic necessity].
- The target sentence is indicated in rounded parentheses at the end of the context with the modal expression in capital letters. Where appropriate for English, I have indicated the infelicitous English modal expression (using the symbol #).
- The temporal orientation (TO) and temporal perspective (TP) is also indicated in square brackets following each discourse context.

The discourse contexts are organized in the following headings, shown in Table 2:

Table 2. Overview of the headings

	EPISTEMIC	ROOT / NON-EPISTEMIC			
		PARTICIPANT-EXTERNAL		PARTICIPANT-INTERNAL	
	Epistemic	Deontic	Teleological	Circumstantial	Bouletic
Necessity	A1	B1	C1	D1	E1
Weak Necessity	A2	B2	C2	--	--
Possibility	A3	B3	C3	D3	--

A. **Epistemic**

A1. Epistemic necessity

(1)   [Target: epistemic necessity vs. deontic necessity] Ramadon routinely has coffee at Lisa's *warung kopi* (café) every day. It's not obligatory for Ramadon; he just goes for coffee there all the time. It's coffee time now, so... (Ramadon MUST be at Lisa's warung.)

[present TP; present TO]

(2)   [Target: epistemic necessity vs. deontic necessity] You know that Mida goes to the market every morning after *subuh* (first prayer)/dawn, even though she is not required to. Right now, you wonder where Mida is. You check the clock: it's 5:30am. (Mida MUST be at the market.)

[present TP; present TO]

(3)   [Target: epistemic necessity] (adapted from von Fintel and Gillies 2007; see also Peterson 2010: 129 on evidential component and logical inference)
The math teacher says: The ball is in A or in B or in C. It is not in A. It is not in B. So (it MUST be in C)

[present TP; present TO]

(4)   [Target: epistemic necessity] Mas Hakim is calling for his cat. The cat is not coming. Mas Hakim looks for the cat in the kitchen, but the cat is not there. Then he looks in the living room, and in the bathroom, and in his sister's bedroom. The cat is not in any of those rooms. Mas Hakim thinks… (The cat MUST NOT be in the house.)

[present TP; present TO]

(5)   [Target: epistemic necessity] Joko went to his friend's house last night, but when he arrived, he saw that the lights were off. Joko returned to his own house without bothering to knock because he thought at that time that…
('My friend MUST NOT be at home.') (…but he/she was!)

[past TP; present TO]

Note: *at that time* in the context refers to the time Joko decided not to knock.

A2. Epistemic weak necessity

(6)   [Target: epistemic weak necessity vs. deontic weak necessity] You know that Pak Sari works from 8am–12pm every morning. Most of the time he goes to the office, but you know that once in a while he works at school. It is now 9am. You say to your friend: (Pak Sari SHOULD be at the office now.)

[present TP; present TO]

(7)   [Target: epistemic weak necessity vs. deontic weak necessity] You are not living in Yogya anymore. You notice how different it is with the weather in Malang, where you live right now. You know that in Yogya it's the rainy season now, and there's often rain in the afternoon, but not necessarily everyday. Now it's 3pm., so, you think: (It SHOULD / #OUGHT TO be raining now in Yogya.)

[present TP; present TO]

Note: This context is also compatible with epistemic possibility. Thus, the target sentence in English 'It MAY be raining now in Yogya.' is also felicitous.

(8)   [Target: epistemic weak necessity vs. deontic weak necessity] When the light is on at Bu Alisma's house, it is usually a sign that she is home. You want to go visit Bu Alisma, and walking by her house, you see that the light is on right now. But you also see sandals by the front door that could be Alisma's sister. You think to yourself: (Bu Alisma SHOULD / #OUGHT TO be at home, …but it's not for sure/for certain.)

[present TP; present TO]

A3. Epistemic possibility

(9)   [Target: epistemic possibility vs. epistemic necessity] Professor Farihi is not consistent. The students never know if he's going to come or not to give a lecture. Today, it's time to start class and the students are waiting again. (He MIGHT / #MUST be coming to the university today.)

[present TP; future TO]

(10)   [Target: epistemic possibility vs. epistemic necessity] Dewi's necklace is missing, and she is looking for her necklace. She looks in her wardrobe and on top of the wardrobe. It's not there. She looks on top of the tv. It's not there. She looks in her backpack; it's not there. Wait! She hasn't checked her sister's wardrobe yet, but Dewi really isn't sure if it would be there…(Dewi's necklace MIGHT / #MUST be in her sister's wardrobe.)

                                                                    [present TP; present TO]

(11)   [Target: epistemic possibility vs. epistemic (weak) necessity] Bambang is looking for his pet cat, but cannot find it. Bambang knows that his cat is very elusive/mysterious. Bambang tells his sister:
         (The cat MAY be inside. The cat MAY also be outside.)
         (The cat MAY be inside and the cat MAY be outside.)
         (#The cat MUST be inside and the cat MUST be outside.)
         (#The cat SHOULD be inside and the cat SHOULD be outside.)

                                                                    [present TP; present TO]

         Note: if the language does not allow sentential conjunction, the additive particle (*also* in English) could be substituted instead.

(12)   [Target: epistemic possibility vs. deontic possibility] Amin's parents told him that he is not allowed to go to see his friend in Jakarta because it is too far away. You heard that Amin is leaving Paciran next week, but you don't know where he will go. Amin is a daring type of guy that usually does things that he is not permitted to do. You think:
         (Amin MAY/MIGHT/ #is allowed to go to Jakarta.)

                                                                    [present TP; future TO]

B. **Deontic**

B1. Deontic necessity

(12)   [Target: deontic necessity] In Indonesia, the law states that when you ride a motor bike...
         (You MUST wear a helmet.)

                                                                    [present TP; present TO]

(13)   [Target: deontic necessity] (adapted from von Fintel 2006, von Fintel & Gillies 2007)
         You are going to visit your friend in the hospital. When you enter in the hospital, you stop at the information desk to inquire what room your friend is in. But the receptionist at the information desk tells you that you can't visit your friend now because it's already 8pm! She says, "I'm sorry, the hospital regulations say that... (Visitors MUST leave by 6pm.)"

                                                                    [present TP; present TO]

(14)   [Target: deontic necessity vs. deontic weak necessity] When Agus went to the hospital, he was confused at first because he tried to get a doctor's appointment, but he couldn't! But then, the nice lady at the information desk explained that he didn't yet have a hospital ID card to be a patient here, and if you don't have one, there are no exceptions. This is because the regulations at the hospital state: (Patients MUST/#SHOULD have a hospital ID card to use the hospital services.)

[present TP; present TO]

(15)   [Target: deontic necessity] Tomo's boss is very strict about getting tasks completed on time. Today, the boss ordered Tomo to finish fixing the motorbike by the end of work day. Now, it is noon. Tomo thinks to himself: (I HAVE TO finish fixing the motorbike this afternoon/today.)

[present TP; future TO]

B2. Deontic weak necessity

(16)   [Target: deontic weak necessity] Waiq is the oldest child, and he is not yet married. His younger brother, Hakim, wants to get married. But according to some family members... (the oldest OUGHT TO marry first.)

[present TP; future TO]

(17)   [Target: deontic weak necessity] (based on von Fintel and Iatridou 2008) Your friend tells you that the rules of the restaurant state that employees must wash their hands after going to the bathroom. You reply to your friend: (Non-employees OUGHT TO wash their hands too!)

[present TP; future TO]

(18)   [Target: deontic weak necessity vs. deontic necessity] Your aunt says that the Sultan's son has to speak *krama* (High Javanese) since he is part of the royal family. She also thinks that in order to show the correct respect and honour to others, (all Javanese people OUGHT TO speak *krama*).

[present TP; future TO]

B3. Deontic possibility

(19)   [Target: deontic possibility vs. deontic necessity] The ferris wheel ride at WBL [an amusement park] is only for children under 15 years old. Tutus is 12 years old. It is not obligatory for Tutus to go on the ride if she doesn't want to. (Kana MAY/#must ride the ferris wheel.)

[present TP; future TO]

(20)   [Target: deontic possibility vs. deontic necessity] According to the rules of the hospital, only family members are allowed to enter the patient's room during visiting hours. You came to visit your sister, but it was after visiting hours. But the really nice nurse says... (You MAY/#MUST enter.)

[present TP; future TO]

(21)   [Target: deontic possibility vs. deontic (weak) necessity] You are making plans for tomorrow night to get together with your friend. Your friend says:
(You CAN stay overnight and you CAN go home.)
(You CAN stay overnight. You CAN also go home.)
(#You OUGHT to stay overnight and you OUGHT to go home.)
(#You HAVE to stay overnight and you HAVE to go home.)

[present TP; future TO]

Note: if the language does not allow sentential conjunction, the additive particle (*also* in English) could be substituted instead. Disjunction could also be used (*or* in English), but it would not then work to elicit minimal pairs with necessity modals.

(22)   [Target: deontic possibility vs. circumstantial possibility] Ria fell down the stairs and broke her arm a while ago. She hasn't been lifting her baby while her arm was hurt because the baby is heavy. Finally, she has recovered, and she went to the doctor for a final check-up. The doctor gave her permission to lift her baby. But when she got home after her visit to the doctor, Ria found that she is still too weak to lift her baby.
(Ria CAN lift her baby.)

[present TP; future TO]

(23)   [Target: deontic possibility vs. circumstantial possibility] Kana's teacher told her class that it was okay/they were allowed to go swimming, but Kana doesn't want to because she cannot swim! (Kana CAN go swimming.)

[present TP; future TO]

C. Teleological

C1. Teleological necessity

(24)   [Target: teleological necessity] (adapted from von Fintel and Iatridou 2008) There is only one main road, Deandles, along the northern coast of Java to get to Semarang from Paciran. (If you go to Semarang from Paciran, you HAVE TO/ #SHOULD take this road.)

[present TP; future TO]

(25)   [Target: teleological necessity] (based on Gluckman and Bowler 2020) Semarang is playing in a tournament. In order to advance: (Semarang HAS TO/MUST/ #SHOULD beat Yogyakarta.)

[present TP; future TO]

(26)   [Target: teleological necessity] The best fried rice in town is made by Pak Bambang. You have invited your sister for dinner, and decide to have fried rice. You tell your sister: We HAVE TO order from Bambang to eat the best fried rice.

[present TP; future TO]

(27)   [Target: teleological necessity] (adapted from Horne 1961: 269) A pound of rice usually lasts for three days, and there are two pounds left now. I don't have time to go to the market because I am away fishing for the next 6 days... (So I HAVE TO/??CAN make the remaining rice last for six more days.)

[present TP; future TO]

C2. Teleological weak necessity

(28)   [Target: teleological weak necessity] (adapted from von Fintel & Iatridou 2008) There are different ways to get to the market in Blimbing. You can go by horse-carriage, rickshaw, public van, or just go by motorcycle by yourself. You are not sure how to go. Patrus advises you to take the horse-carriage because it is traditional. (To get to the market in Blimbing, you SHOULD take a horse-carriage.)

[present TP; future TO]

(29)   [Target: teleological weak necessity] (adapted from von Fintel & Iatridou 2008) There are three ways to get to Yogya: the Semarang Route, the Bojonegero route, and the Surabaya route. Cak Khuluq says that the Bojonegero route is very beautiful. So according to him, (If you go to Yogya, you SHOULD take the Bojonegero route.)

[present TP; future TO]

(30)   [Target: teleological weak necessity vs. teleological necessity]. Your friend wants to buy a new shirt for her new job at a reasonable price. There are many nice shops for professional clothes in the area, and you work at one of them and think it offers good prices. You say: You SHOULD / #HAVE TO go to my shop to buy a new shirt.

[present TP; future TO]

C3. Teleological possibility

(31)   [Target: teleological possibility] (based on Kolagar 2018: 52) There are two different ways to get to Sari from Tehran. Both take around 7 hours by bus and they are equally beautiful. (You CAN / #MUST take the Haraz road.)

[present TP; future TO]

(32)   [Target: teleological possibility]. There are two swimming pools in the town with the exact same design and both are equal distance from your house. You plan to go swimming later on, but have no specific desire for which pool to go to. But you know that more people swim at the pool to the west for some reason. You tell your sister: ('We CAN go to the swimming pool to the west (to meet more people).')

[present TP; future TO]

(33)   [Target: teleological possibility] Your friend wants to buy a new shirt for her new job. Since there are many nice shops for professional clothes in the area, you say: ('You CAN go to Maula's boutique.')

[present TP; future TO]

D. **Circumstantial**

D1. **Circumstantial necessity**

(34) [Target: circumstantial necessity] You are on a bus to Yogya. You have not had a chance to go to the toilet for 4 hours, and your bladder is full. You text your friend: (I HAVE to pee so badly!)

[present TP; future TO]

(35) [Target: circumstantial necessity] Normally at *ngaji* (Holy Qu'ran reading), it is time to be serious. But then we saw Bu Yeni had fallen asleep in a funny position/with her mouth wide open. (Our friend Bu Siti HAD TO laugh.)

[past TP; present/future TO]

(36) [Target: circumstantial necessity] (cf. Kratzer 1991, von Fintel 2006, Gluckman & Bowler 2020) In the middle of a conversation, you feel a sneeze coming on. You say: (Excuse me! I HAVE TO sneeze.)

[present TP; future TO]

(37) [Target: circumstantial necessity with inanimate subject] (from Gluckman & Bowler 2020: 216) You have an old car. Because it is old: (The car NEEDS/HAS TO have oil.)

[present TP; present TO]

D3. **Circumstantial possibility**

(38) [Target: circumstantial possibility vs. epistemic possibility] (Adapted from Kratzer 1991) Context: Ani came to visit a small island in the Philippines. She noticed that the climate and many of the plants are similar to some places she visited in Sulawesi, Indonesia. For example, the temperature is the same, the rainfall is the same, the types of rocks and the soil are the same. But when she looked around, she didn't find any *duku* trees anywhere. But because the temperature, rainfall, and soil are the same, she thinks that: (Duku trees CAN/#might grow here.)

[present TP; future TO]

(39) [Target: circumstantial possibility vs. epistemic possibility] Jozi knows how to make *dudoh menir* [a kind of sauce]. Now she is back in Canada, and she wants to make *dudoh menir*, but the right kind of ingredients are not sold where she lives! So she's unhappy because she wanted to show her parents how to make *dudoh menir*. (Jozina CAN / #might make *dudoh menir*.)

[present TP; future TO]

(40) [Target: circumstantial possibility] Budi was in a motorbike accident 3 weeks ago, and he sprained his ankle. Budi is able to walk now. However, the doctor told Budi that he is not allowed to walk until 5 weeks after the accident. (Budi CAN walk now.)

[present TP; present TO]

(41) [Target: circumstantial possibility vs. deontic possibility] (adapted from Kratzer 1991:640) Pak Diki is quite old now, but he is still strong. His children are scared that he will hurt his back if he does any intense labour, so they told him that he is forbidden to lift heavy things. But one day Diki's friend Roshid asked to help him in the field, because Roshid knows Diki is still strong. So when Roshid saw a large rock that had to be moved, he asked Diki straightaway for help (but he didn't tell Diki's children!). Roshid knew that... (Diki CAN lift that rock)

[present TP; present TO]

(42) [Target: circumstantial possibility vs. deontic possibility] The 'travel' vans have a limit of 13 people by law. But the drivers don't care, and stop for more than 13 people. Also, the vans are bigger than you think. (Travel vans CAN fit 20 people.)

[present TP; present TO]

E. Bouletic

E1. Bouletic necessity

(43) [Target: bouletic necessity] (based on Gluckman & Bowler 2020: 217): You love designer shoes. You see beautiful Gucci shoes in a store window, and you say: (I WANT/NEED TO buy them.)

[present TP; future TO]

(44) [Target: bouletic necessity vs. deontic necessity] Your friend asks you what you desire to do today since it is a holiday and you both are not required to do any tasks today. You say: (I WANT to go to the cinema.)

[present TP; future TO]

(45) [Target: bouletic necessity] A daughter tells her parent: (My friend WANTS to visit me. I also WANT my friend to visit.)

[present TP; future TO]

Acknowledgements

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