

Extended Questionnaire for modals

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(created for the UKRI FLF project “Logic in Semantic Universals” based on Vander Klok 2021 “Revised modal questionnaire for cross-linguistic use”)

Aims of this Questionnaire

To discern and elicit certain semantic properties of modal particles in a variety of languages, using the following verbal contexts to both elicit and test the acceptability in context of these modal particles. The intended end result is a collection of linguistic data, or a database, consisting of an inventory of modal particles in that language classified by the type of modality they express/their modal flavor (epistemic, deontic, teleological, or bouletic) and their modal force (necessity vs. weak necessity vs. possibility vs. weak possibility).

The contexts (1)-(44) in Sections A-E of the questionnaire target different modal flavors and forces; each flavor and force to be targeted are clearly indicated at the beginning of each section/subsection.

Ideally, the successful completion of this questionnaire would allow us to categorize the modals in use in a particular L according to their modal force and flavor, using a table like the one below (adapted from Vander Klok 2021):

Table

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

Non-necessity	<u>A4 Epistemic Non-necessity</u>	<u>B4 Deontic non-necessity</u>	<u>C4 Teleological non-necessity</u>	<u>D4. Circumstantial non-necessity</u>	
Impossibility	<u>A5 Epistemic impossibility</u>	<u>B5 Deontic impossibility</u>	<u>C5 Teleological impossibility</u>	<u>D5. Circumstantial impossibility</u>	

The questionnaire will in part aim to test the semantic universal proposed by Steinert-Threlkeld, Imel, and Guo (2020), dubbed IFF or Independence of Force and Flavor universal. This states that the two axes of variation in modal semantics, force and flavor, are independent of each other: if a modal can express the pairs fo_1, fl_1 and fo_2, fl_2 , then it can also express fo_1, fl_2 and fo_2, fl_1 .

Another aim of the questionnaire is the creation of a text document for each language with empirical examples from the language that demonstrate the semantic properties of particular modal particles in that language, following the semantic properties elicited in and targeted by the questionnaire.

Format

Each language to be tested (L) is to be identified both by its name and by its Glottolog ISO-639 code in a text document provided, separate to the questionnaire. Each language L will have a separate text document in which concrete examples of the phenomena to be tested (i.e., concrete examples displaying the monotonicity of L's quantifiers) will be listed by the researcher. and a separate Excel spreadsheet in which to list quantifiers. The Excel spreadsheet will follow the formula laid out in the Aims section. In the text document, indicate whether you are filling out the questionnaire based on your own introspective judgments or based on consultation with native speakers.

Please ensure that all examples are glossed according to the Leipzig conventions. If these differ from glosses usually used in the language, then adhere to standard glossing conventions for that particular language. If known, also please make note of the region that the speaker is from and whether they speak any other languages.

Modal inventory

Please list the modals present in your language, with particular consideration given to the types listed in the table. If there are modals that do not necessarily neatly fit into one of the rows in the table, these can be listed underneath.

Instructions for fieldworkers

This questionnaire can be run as a translation task or as a value-judgment task, at the fieldworker's discretion. If the fieldworker has sufficient knowledge of the language L to be tested, the contexts and target constructions could first be proposed in L, with the researcher assessing whether a particular modal is acceptable in a particular context. If the fieldworker is working with L for the first time, or published data for L is lacking, the questionnaire would be better run first as a translation task, with a view to running it at a later date as a value-judgment task. Contexts can be presented in the target language or in a contact language, such as English. The choice of which language to present the contexts in is up to the fieldworker.

For instance, if running the questionnaire as a translation task, it could be presented as follows:

Context (either in a contact language or the target language): (You know that) Ben goes swimming every day. Ben does not have to go swimming. It is now time for Ben to go swimming, so:

TARGET: Ben **MUST** be swimming.

If running the questionnaire as a value-judgment task, then the context could be presented as above, but the target would include a modal in the language that the researcher wishes to test.

Sentences or particles presented with a # in front of them are not to be translated; they are included as illustrations of sentences or particles that are not suitable in the given context.

Questions such as (6) can be adapted to consultants; i.e., places that are referred to can be changed depending on where the consultant is from so as to make the resulting target sentences less abstract.

BODY OF THE QUESTIONNAIRE

A. EPISTEMIC

A1 Epistemic Necessity

Target: epistemic vs. deontic necessity.

(3) and (4) target only epistemic necessity.

(1) Ben goes swimming every day. Ben is not obliged or required to go swimming; it is just a habit of his. It is now time for Ben to be swimming... so **Ben must be swimming (right now).**

(2) You know that John goes to school at 9am every day. You look at the clock and see it is 9am, therefore **John must be at school.**

(3) (Adapted from von Fintel & Gillies 2007). The math teacher says: There are 3 boxes. The ball is in box A or in box B or in box C. It is not in A. It is not in B. So, **it must be in C.**

(4) Tim is calling for his dog. The dog is not coming. Tim looks for the dog in the kitchen, bedroom, living room, (in every room in the house) but the dog is not in any of those rooms. Therefore, Tim concludes that **the dog must not be in the house.**

A2 Epistemic Weak Necessity

Target: epistemic weak necessity vs. deontic weak necessity

(6) is also compatible with testing for epistemic possibility.

(5) You know that Ann goes hiking from 7am until 8am every day. Most of the time Ann goes to the lake, but sometimes she goes to the mountains. It is now 7:30am and your friend asks where Ann is. You say to your friend: **Ann should be at the lake right now.**

(6) (Imagine that) you used to live in Goa. You are not living in Goa anymore. You notice how different the weather is in the UK, where you live right now. You know that it often rains in Goa, especially in the afternoon, but not necessarily every day. Now it's the afternoon, so you think **it should be raining now in Goa.**

(7) When the light is on at Mary's house, it usually means that she is home. You want to visit Mary. You walk past Mary's house and notice that the light is on. You think to yourself: **Mary should be at home.**

A3 Epistemic Possibility

Target: epistemic possibility vs. epistemic necessity

(11) targets epistemic possibility vs. deontic possibility

(8) The teacher is not consistent. The students never know if he's going to come or not to teach class. Today, it's time to start class and the students are waiting again. **He might be coming to school today.**

(9) Grace 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. However, she has not checked two other places. She hasn't checked her sister's wardrobe yet. She hasn't checked the car either. **Grace's necklace might be lost.**

(10) Charles is looking for his pet cat, but cannot find it. He knows that his cat is very elusive and mysterious. Charles tells his sister:

The cat may be inside. The cat may also be outside.¹

(11) Daniel lives in London and his friend has recently moved to New York. Daniel's parents told him that he is not allowed to go and see his friend in New York because it is too far away. You heard that Daniel is leaving London next week but you don't know where he will go. Daniel usually does things that he is not permitted to do. **You think Daniel might go to New York.**

A4 Epistemic Non-necessity

(7') When the light is on at Mary's house, it usually means that she is home. You want to visit Mary. You walk past Mary's house and notice that the light is on. However, there is no car in the driveway. You think to yourself: **Mary may not be at home.**

A5 Epistemic impossibility

(1') Ben goes swimming every day. Ben is not obliged or required to go swimming; it is just a habit of his. It is now time for Ben to be swimming... so **Ben can't be at home.**

(3') The math teacher says: There are 3 boxes. The ball is in box A or in box B or in box C. We opened box A, and the ball is there. There is only one ball. So, **it can't be in C.**

B. DEONTIC

B1 Deontic Necessity

Target: deontic necessity

(12) In Indonesia, the law states that when you ride a motor bike... **You must wear a helmet.**

(13) You are going to visit your friend in the hospital. When you enter into the hospital, you stop at the information desk to inquire what room your friend is in. But the woman 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.**"

¹ (The task is not only to translate these two sentences individually, but to keep in mind the sequencing i.e., these sentences are not to be used in isolation).

B2 Deontic Weak Necessity

Target: deontic weak necessity

(16) Your friend is having a birthday party. She tells you that she would like it if everyone invited wore formal clothes, but that it is not necessary to wear formal clothes to attend. You think to yourself... **I ought to wear formal clothes to the party.**

(17) 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!**

(18) In England, it is recommended that face coverings be worn in stores, but it is not a legal requirement. You plan on going shopping, and you think to yourself... **I ought to wear a face covering.**

B3 Deontic Possibility

Target: deontic possibility vs. deontic necessity

(22) and (23) target deontic possibility vs. circumstantial possibility

(19) The ferris wheel ride is only for children under 12 years of age. Martin is 10 years of age. It is not obligatory for Martin to go on the ride if he doesn't want to, but **Martin may ride the ferris wheel.**

(20) 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 after visiting hours. But the really nice nurse says... **You may enter.**

(21) You are making plans for tomorrow night to meet up with your friend. Your friend says:
You can stay overnight or you can go home.
You can stay overnight. You can also go home.

(22) Alice 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, Alice found that she is still too weak to lift her baby, although according to the doctor's orders **Alice can lift her baby.**

(23) Beth's teacher told her class that it was okay to go swimming, but Beth doesn't want to because she has never learnt to swim! However, as far as the teacher's directions are concerned...
Beth can go swimming.

B4 Deontic non-necessity

(16') Your friend is having a birthday party. She tells you that she would like it if everyone invited wore formal clothes, but that it is not necessary to wear formal clothes to attend. You think to yourself... I ought to wear formal clothes to the party, but **I don't have to / needn't wear formal clothes.**

(18') In England, it is recommended that face coverings be worn in stores, but it is not a legal requirement. You plan on going shopping, and you think to yourself... I ought to wear a face covering, but **I don't have to / needn't wear a face covering.**

B5 Deontic impossibility

(12') In Indonesia, the law states that when you ride a motor bike... **You mustn't ride a motor bike without a helmet.**

(13') You are going to visit your friend in the hospital. When you enter into the hospital, you stop at the information desk to inquire what room your friend is in. But the woman 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 mustn't stay after 6pm.**"

C. TELEOLOGICAL

C1 Teleological Necessity

Target: teleological necessity

(24) There is only one main road from Location A to Location B... If you go from Location A to Location B, **you have to take this road.**

(25) Team A are playing in a tournament. In order to advance... **Team A has to beat Team B.**

(26) The best pizza in town is sold at Gino's. You have invited your sister for dinner, and you decide to order pizza. You tell your sister: **We have to order from Gino's** to eat the best pizza.

C2 Teleological Weak Necessity

Target: teleological weak necessity

(27) There are different ways to get to the shopping centre. You can go by foot, by bus, or drive yourself. You are not sure how to go. Your friend advises you to get the bus because it is cheaper... **To get to the shopping centre, you should take the bus.**

(28) There are 3 ways to get to the seaside: a direct road, taking smaller roads, or a combination. Your friend says that taking the smaller roads is very beautiful. According to him, **you should go via the smaller roads.**

(29) Your friend wants to buy a new shirt for her 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 go to my shop to buy a new shirt.**

C3 Teleological Possibility

Target: teleological possibility

(30) There are two different ways to get to the mountains from the city centre. Way 1 is inland and way 2 goes around via the coast. Both take around 7 hours by bus and they are equally beautiful... **You can take way 1.**

(31) There are two swimming pools in the town with the exact same design and both are an equal distance from your house. You plan to go swimming later on but have no specific desire for which pool to go to. You tell your sister... **We can go to the swimming pool to the west.**

(32) Your friend wants to buy a new shirt for her job. Since there are many nice shops for professional clothes in the area, you say... **You can go to this boutique.**

C4 Teleological non-necessity

(27') There are different ways to get to the shopping centre. You can go by foot, by bus, or drive yourself. You are not sure how to go. Your friend advises you to get the bus because it is cheaper... To get to the shopping centre, you should take the bus, but **you don't need to / needn't take the bus.**

C5 Teleological impossibility

(24') There is only one main road from Location A to Location B... If you are going from Location A to Location B, **you can't take another road.**

(25') Team A are playing in a tournament. In order to advance... **Team A can't lose to Team B.**

D. CIRCUMSTANTIAL

D1 Circumstantial Necessity

Target: circumstantial necessity; (35) with inanimate subject

(33) You are on a bus. 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!**

(34) In the middle of a conversation, you feel a sneeze coming on... Excuse me! **I have to sneeze.**

(35') Water is entering a pipe, which has two outputs: the left output and the right output. You block the left output so that **the water must come out from the right output.**

D3 Circumstantial Possibility

Target: (36) & (37) circumstantial possibility vs. epistemic possibility

(38) circumstantial possibility

(39) & (40) circumstantial possibility vs. deontic possibility

(36) 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 Indonesia, where *duku* trees grow. 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 grow here.**

(37) Amy was in Italy and learned how to make traditional Italian pasta. Now Amy is back in the country she lives in, and she wants to make traditional pasta, but the right kind of ingredients are not sold where she lives. So, she is unhappy because she wanted to show her parents how to make traditional pasta...

Amy can make traditional Italian pasta (but she does not have the ingredients).

(38) Ben was in a motorbike accident 3 weeks ago, and he sprained his ankle. Ben is able to walk now. However, the doctor told Ben that he is not allowed to walk until 5 weeks after the accident...

Ben can walk now.

(39) Paul is quite old now, but he is still strong. His children are scared 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, his friend Rob asked to help him in the field, because Rob knows Paul is still strong. So when Rob saw a large rock that had to be moved, he asked Paul straightaway for help (but he didn't tell Paul's children!). Rob knew that... **Paul can lift that rock.**

(40) 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.**

D4. Circumstantial non-necessity

(44) Given the way this volcano has been active in the past 100 years, it is likely but not certain that it will erupt in the next 5 years. **The volcano doesn't have to erupt.**

D5. Circumstantial impossibility

(34') Ben was in a motorbike accident 3 weeks ago. He sprained his ankle and is in a lot of pain.
Ben can't walk.

(35') Water is entering a pipe, which has two outputs: the left output and the right output. But, you know that the left output is blocked. And the water is coming out from the right output. You say: **the water can't come out from the left output.**

(36') Ani came to visit a small Caribbean island. She noticed that the climate and many of the plants are very different to the places she visited in Indonesia, where *duku* trees grow. The types of rocks and the soil are different as well. She doesn't know whether or not there are *duku* trees on the island. But because the temperature, rainfall, and soil are so different, she thinks that... ***duku* trees can't grow here.**

E. BOULETIC

E1 Bouletic Necessity

Target: bouletic necessity

(42) targets bouletic necessity vs. deontic necessity

(41) You love handbags. You see a really nice handbag in a window and you say... **I must buy it.**

(42) Your friend asks you what you want to do today since it is a holiday and you both are not required to do any tasks today. However, you absolutely want to see this new movie that everyone is talking about- You say... **I must to go to the cinema.**

(43) A daughter tells her parent... **My friend wants to come visit me.**

