

# Maonan Animals (M) (NACLO 2024 R2)

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## Problem

[https://naclo.org/resources/problems/2024/NACLO2024ROUND2\\_booklet.pdf](https://naclo.org/resources/problems/2024/NACLO2024ROUND2_booklet.pdf)

## Explanation

### M1

#### Starting Point (Part 1)

To start off, we know that the language is called Maonan, and we have choice M) Maonan person. Languages are usually named for what the people call themselves (or the name for the language in that language itself), so it would be reasonable if the translation for “Maonan person” sounds like ‘Maonan.’ Indeed, we look through the numbered choices and find 19) ?ai.na:n. The “na:n” is very similar to the nan in Maonan, so we can make our first guess that 19 matches with M. If na:n carries the meaning of “Maonan,” then the other part - “?ai” - should mean person, which also gives us 20 as K (the only other person).

We have matched ?ai.nda.la:n to “jealous person,” determining that ‘nda.la:n’ must mean jealous or something similar. We see that this word is a compound word composed of two separate morphemes, nda and la:n. In many languages, emotions such as jealousy are typically associated with body parts; we see that, in the English list, there are two body parts associated: teeth and eyes (eyes can be derived from tears, which are likely the water of the eyes). Jealousy would probably be related to the latter for obvious reasons

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(i.e. seeing something is associated with wanting it and possibly jealousy, and also, teeth are likely not related to jealousy). We guess that either *nda* or *la:n* means eye(s).

At this point, we can try either one. Let's first go with *la:n*. If *la:n* means eye, then 17) *nɔk.ʔep la:n* would be S) tear (the liquid released when crying); however, tear is probably just "eye water" or "water eye" or the like, which is only two morphemes. Indeed, if eye is *nda*, then we have 12 *nam.nda*, which matches to our expectations. We thus hypothesize that water is *nam* and eye is *nda*.

## Part 2

We can establish a rough word order now: the actual thing comes first, and modifiers come later (we can see this from ʔai.nan, person + maonan, and *nam.nda*, water + eye).

Thus, we know that our translation of "jealous person" is person + eye + (some modifier that is yet unknown to us).

Now that we know water = *nam*, we have 4) *dat.put.nam*, and we also have T) water sprayer. We make this match. R) to spray resolutely should share the root for "spray," which is either *dat* or *put*; however, note that *dat* appears 3 times, while *put* appears twice. The action of spraying only appears twice, so we guess that to spray = *put*, so 18) *put.pɔk* is R) to spray resolutely.

So far, we have the following:

4T, 12S, 18R, 19M, and 20K

(The following part is the part that is the biggest stretch, in my opinion, so if you have any better ideas, ...)

We know that *pɔk* = resolutely; in addition, we have F) to eat resolutely. However, it appears that there is no other word in Maonan that has *pɔk* in it, so it looks like we did something wrong and are now stuck.

Actually, upon closer inspection, we see 11 is *na.nɔk*, the latter morpheme which sounds suspiciously like *pɔk*. Glancing at our tasks, in M2, we are asked to translate *tan.tɔk*, yet *tɔk* does not appear anywhere else. We therefore hypothesize that the adverb "resolutely" takes the form *Cɔk*, where C is the initial consonant of the previous syllable. Based on this

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hypothesis, we let 11 be F) to eat resolutely. This gives us na = to eat, and we see that na appears in two more places: 1 and 2. Recall in 4, we translated it as water sprayer, which is dat + (to spray) + (water); we guess that dat makes it a noun or thing. This suggests that 2) dat.na is H) food (thing eat), and that leaves us with 1) da:i.na as E) delicious (which is the other thing related to food). We guess that delicious translates to “good food” or something similar; this gives us “da:i” is good. Further, there is I) good teeth and 9) kjɔŋ.hi:u da:i, so we make this match.

So far:

1E 2H 4T 9I 11F 12S 18R 19M 20K

### Part 3

We now know that kjɔŋ.hi:u means teeth. Teeth is specifically the plural form of tooth, and so we can guess that kjɔŋ and hi:u mean plural and tooth, in some order; it is more likely that the plural comes first, so we hypothesize that kjɔŋ indicates plurality and hi:u means tooth. (We did establish that modifiers follow the actual thing, but note that here we also have da:i following. One could also go the other way assuming that kjɔŋ was tooth and hi:u meant plural, but it would not work.) We see P) hens is the other specific plural, so 10 is P, the only other plural noun in the list. Also, 8) hi:u.gwi must mean molar as hi:u means tooth (sg). A molar is kind of like a strong tooth, so gwi is associated with strength or the like.

From 10), ka:i.ni must mean hen, which is a female chicken. This tells us that ka:i and ni mean female and chicken in some order; going with our word order of modifiers afterward, we say that ka:i means chicken and ni means female.

Now that we know that ni as a following modifier means female, we see 7) dɔ.mu.ni and Q) sow (a female pig); we make this match, and so dɔ.mu means a pig of some kind. We see a lot of initial words that are repeated: dat (which we translated to be a noun marker, but we could also reinterpret it to be a class that makes it into a kind of noun), dɔ, kjɔŋ, ni, nɔk, and ?ai. Clearly, these are probably not all single nouns, and we make the tentative guess that they are actually classes. This leaves us with mu as the root for pig.

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The other appearance for pig is B) big pig and 15) ni mu; we can make this match also, and - as a bonus - we establish that ni is a large class when it is in the prefix position. The other things with ni as a class of something large are 13 and 14, and the other obviously big things in English are probably C) bull (male buffalo) and G) elephant. The former has the extra modifier of male, so we match it to 14) ni.gwi.dak, which could mean large.buffalo.male, while G) elephant goes to 13) ni.dzja:ŋ.

(To clarify any confusion: certain morphemes like ni and a certain other one we will encounter later can mean different things depending on their position. ni at the start of a phrase indicates the class for something big, while at the end indicates femininity. This makes sense in another Kra-Dai language, Thai, which refers to something big as “mother” - for example, in Thai, a river is literally “mother water.” This also happens in English, too - e.g. the motherboard is usually the main large circuit board.)

1E 2H 4T 7Q 8N 9I 10P 11F 12S 13G 14C 15B 18R 19M 20K

As we have established that gender comes at the end, we say that dak indicates masculinity, so gwi means buffalo. Recall earlier that in “molar tooth,” we said that gwi was associated with strength; this makes sense, as a buffalo is thought of as a muscled working animal. This lets a molar tooth be tooth.buffalo.

Our remaining things to translate are 3, 5, 6, 16, and 17. Our remaining English phrases are A, D, J, L, and O.

Recall that dat is a noun classifier; the odd ones out here are 3) dat.tan and D) clothing, which are both objects (not animals). We match these two.

#### **Part 4 (Finishing Up)**

We now have 5, 6, 16, and 17 and A, J, L, and O left.

We established earlier that ka:i means chicken. Our two remaining chicken relatives are A) bad chicken and O) pheasant (the text at the bottom informs us that pheasants are related to chickens), so these two are 6 and 16, in some order.

Let us go back to the beginning. We said early on that la:n was an adjective to create a jealous person; the most obvious translation would be “bad-eyed person,” but that would

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say that 17 is bad chicken, but 17 does not have ka:i in it; thus, we disregard that idea.

The only remaining obvious adjective in A, J, L, and O is “red.” This could possibly make sense: a jealous person is a red-eyed person. We thus hypothesize that la:n means red, so 17 is L) red mallard.

5 6 16, A J O

Now, we are left in English with A) bad chicken, J) dog, and O) pheasant. J) dog is completely unrelated, as is 5) dɔ.ma, so we match these two. It is now a matter of matching 6) dɔ.ka:i ja:m and 16) nɔk.ka:i to A) bad chicken and O) pheasant. Clearly, the former has “bad” as an extra modifier, so we let it be 6, which leaves us with O being 16. (Also, we know that an adjective like bad should follow the noun, which matches here.)

1E 2H 3D 4T 5J 6A 7Q 8N 9I 10P 11F 12S 13G 14C 15B 16O 17L 18R 19M 20K

QED.

## M2

Recall that we said that kjɔŋ meant plural, mu meant pig, and dak meant male. Thus, we translate the first task of M2 as “male pigs.”

“nda” means eye and “da:i” means good; this can literally be translated as “good eye,” which can be further literally interpreted to be related to good eyesight, but it could also be an emotional quality - e.g. selfless or sympathetic.

Recall that we matched 3) dat.tan to D) clothing; this suggests that tan means to wear. Recall that we hypothesized that Cɔk meant resolutely; it makes sense that this tɔk also means resolutely. The word preceding tɔk, tan, starts with t, so in this case C=t. Thus, this means “to dress/to wear resolutely.”

Finally, recall that we let 6) dɔ.ka:i ja:m be A) bad chicken. This implies that ja:m means bad, and again, tan means to dress/wear, so the literal translation is “to dress/wear badly” or possibly to wear uncomfortable clothes (or something similar). However, in 1 and E, we established that delicious is good.eat, which is adjective + verb. Thus, ja:m.tan could mean bad wear as an adjective, which could be “uncomfortable to wear.”

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### M3

1. We simply have plural + eye, so *kjɔŋ.nda* is our answer.
2. Our root for to spray is simply “put”.
3. This is plural female buffalos. This is very similar to P, except buffalo instead of chickens; we thus have “*kjɔŋ.gwi.ni*”. Additionally, 7) and 14) tell us that the class is still necessary even while gender is specified, but 10) tells us that class disappears when plurality is expressed.
4. The wearer of something is probably person + to wear, so we simply have “*?ai.tan*”.
5. Finally, we have domesticated/farmyard duck. We never described what all of the classes actually meant, but we can do it now. We are given that pheasants are specifically *wild* birds, and their class is *nɔk*. Red mallards are also *nɔk*, so we assume that they are inherently classified as wild birds. In this task, we specifically want domesticated ducks (mallards are ducks), and the corresponding class is probably *dɔ* (dog, bad chicken, female pig). Thus, our answer is “*dɔ.ʔɛp*”.

### M4

We found above that *dɔ* is for domesticated animals while *nɔk* is for wild animals, so this is the difference between them. (Actually, specifically, these describe wild birds vs domesticated animals.) *nɔk.ŋa:n* could be any kind of wild bird; I believe I put “wild goose” because *ŋa:n* sounds quite similar to *ha:n*, which means goose in Thai (another Kra-Dai language).

### M5

A noun phrase is typically composed of three components: prefix, noun, and adjective. Firstly, the prefix can either be a class or a plurality indicator, as indicated by the following table:

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prefix	meaning
dat	object/noun
dɔ	domesticated animal
ni	large/big
nɔk	wild bird
?ai	person
kjɔŋ	plural

dat-VERB-(NOUN) is also a valid way to form a noun phrase (e.g. dat.put.nam is thing.spray.water water sprayer and dat.na is thing.eat, food).

The core of a noun phrase is the noun itself, and adjective modifiers follow (these modifiers can also be genders: male is -dak while female is -ni). However, the adjective “good” can also function as a class when necessary (i.e. da:i.na = good.eat = delicious); in this case, adjective + verb can become another adjective.

The adverb “resolutely” has the form Cɔk, where C is the initial consonant (onset) of the preceding syllable.