## Double and upside down passives in Scandinavian

In (Mainland) Scandinavian, passivisation of monoclausal structures normally targets the main verb. Modals, aspectual auxiliaries, and other verbs with auxiliary properties are not affected:

(1) Barnehage-n skal begynne å bygge-s 17 juni i år. (Nor) kindergarten-DEF shall begin to build-PASS 17<sup>th</sup> June in year 'The kindergarten will begin being built on the 17<sup>th</sup> of June this year.'

In biclausal structures, there can (unsurprisingly) be two cases of morphological passive marking corresponding to two cases of syntactic passivity:

- (2) Ola nekte-s å operere-s.
  Ola refuse-PASS to operate-PASS
  'Ola is refused an operation.'
- (3) Odell uppge-s peta-s från topp-en. (Swe)
  Odell indicate-PASS poke-PASS from top-DEF
  'Odell is allegedly being removed from the top ranks.'

More interestingly, we also find cases where two morphologically passive verbs, one of them an auxiliary or auxiliary-like verb, the other a main verb, appear to represent only one passivisation in the syntax. Many speakers do not accept this, but web searches indicate that these sentences are not uncommon. We refer to the construction as "double passive":

Kommuner **(4)** som bryter bibliotekslagen bör kunna-s (Swe) mot municipalities that break against library-law-DEF ought can-PASS utsätta-s sanktioner. för subject-PASS for sanctions. 'It ought to be possible for municipalities that violate the library law to be subjected to sanctions.'

In Norwegian, both periphrastic and suffixal passives can appear in double passives, as shown in (5)-(7), although there appears to be a preference for the latter:

- (5) Det som pleie-s å gjøre-s er å snakke med pasient-en så mye man kan. it that tend-PASS to do-PASS is to talk with patient-DEF as much one can 'What one usually does is talk to the patient as much as possible.'
- (6) Bydel-en ble begynt å utvikle-s fra slutt-en av 1970-tallet. district-DEF was begun to develop-PASS from end-DEF of 1970'ies 'The district began to be developed at the end of the 1970'ies.'
- (7) Noen som vet hvorfor den plutselig ble sluttet å bli sendt? anyone that knows why it suddenly was stopped to be sent 'Anyone who knows why it suddenly stopped being aired?'

The higher passive verb in (4)-(6) apparently does not affect the interpretation, since corresponding expressions where only the lower verb has passive form convey the same meaning—compare (6) to (8):

(8) Bydel-en begynte å utvikle-s fra slutt-en av 1970-tallet. district-DEF begun to develop-PASS from end-DEF of 1970'ies 'The district began to be developed at the end of the 1970'ies.'

In addition, the passive morphology is sometimes absent from the lower verb. The auxiliary can have *s*-passive or periphrastic passive. We will refer to this pattern as the "upside down" passive:

- (9) Undersökning av detta kommer inte kunna-s göra förens onsdag. (Swe) investigation of this comes not can-PASS do until Wednesday 'An investigation of this will not be possible to do until Wednesday.'
- (10) Han skal vel også kunne-s bruke på venstre-sid-en i forsvar-et. (Nor) he shall PRT also can-PASS use at left-side-DEF in defence-DEF 'He will supposedly also be useful on the left side of the defence.'
- (11) Noen som husker når den kom og når den ble sluttet (Nor) anyone that remembers when it came and when it was stopped å produsere? to produce 'Anyone who remembers when it arrived and when they stopped producing it?'

Confronted with these data, one might think that the upside down-passive is a logical first step, with passivisation applying to the projection containing the main verb and the auxiliary, being marked on the auxiliary only but scoping over the projection as a whole. Then in the next step, the morphological marking spreads to the main verb and the double passive results.

However, there are indications that the double passive is an older phenomenon in Danish, Norwegian and Swedish than the upside down-passive. Hence, we will suggest another explanation for these passives. Starting from the construction where only the main verb is marked for passive, the marking spreads to the auxiliary, and the double passive arises. Syntactically, the passivisation still applies to the main verb, and the marking of the auxiliary is due to feature agreement (examples like (6) show that it is not simply copying of morphology).

Once the agreement relation is established, the cohesion between the auxiliary and the main verb gets stronger, and consequently, passivisation applying to the verbal complex can be marked on the auxiliary only, i.e. we get the upside down-passive.

Finally, we note that the passive marker -s also sometimes shows up as a marker of raising verbs, even in the absence of passivisation, as in (12) and (13):

- (12) Studie-n identifiserte lærer-utdanning som et av hoved-område-ne som study-DEF identified teacher-training as one of main-areas-DEF that treng-s å bli bedre.

  need-S to become better

  'The study identified teacher training as one of the main areas that need to improve.'
- (13) Du kan jo begynne-s å telle i register-et til Sears. you can you.know begin-s to count in register-DEF of Sears 'You can begin counting in Sears' register, you know'