GERMAN PARTICLES, MODAL CONCORD AND THE SEMANTICS OF IMPERATIVES

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Background – The semantics of imperatives has been in the focus of recent research such as Portner (2005, 2007) and Schwager (2005). Schwager assumes a covert performative modal with *universal* force. Portner claims that imperatives do *not* encode modal force and suggests a pragmatic account in which imperatives contribute to the hearer's *To-Do List* and a rational speaker aims to realize as many entries on her To-Do List as possible. To account for the difference between universal, "commanding" imperatives (1a) and existential, "permissive" imperatives (1b), Schwager (2005) develops a pragmatic account that crucially assumes that the hearer has already wanted to carry out the action expressed in the imperative, but has felt that it was prohibited to do so (see also Han 2000 in this context). In contrast, Portner (2007) assumes such differences are linked to various sections of the hearer's To-Do List, corresponding to different ordering sources (e.g. orders are *deontic* and permissions are *bouletic*, referring to the hearer's wishes). Crucially, both assume that imperatives always express "necessity" and the feeling of "possibility" is a derived effect. In this paper I show that this cannot be correct.

Proposal – In this paper I revisit the semantics of imperatives in the light of the German discourse particles *JA* (pronounce: "stressed JA", homophonous with *ja* 'yes') and *ruhig* (homophonous with *ruhig* 'quietly') illustrated in (2a+b). I show that the distribution of *JA* and *ruhig* can only be accounted for by assuming that imperatives contain a covert element that introduces modal necessity or modal possibility. The empirical evidence thus favors an approach that assumes an element introducing modal quantification (such as Schwager's) over an approach that does not involve quantification (such as Portner's). However, it also requires a fundamental revision of Schwager, in that we need to assume the imperative operator to be lexically ambiguous between a universal necessity reading and an existential possibility reading.

JA and *ruhig* interact with modality... – The elements *JA* and *ruhig* occur only in imperatives (2) and in modalized declaratives (3), but not in non-modalized declaratives (4); they are sensitive to the modal force that holds at the clause level. *JA* combines only with "strong" modal force, i.e. with necessity (3a) and impossibility (3b), whereas *ruhig* combines only with "weak" modal force, i.e. with possibility (3c) and non-necessity (3d). They also restrict the modal base and ordering source of the utterance they occur in (in terms of Kratzer 1991): The modal base they combine with must be circumstantial (5a+b); the ordering source must be one of non-dynamic root modality (6).

...by way of modal concord – Although they thus govern the modality of an utterance, they cannot occur without another modal element in the clause, as shown by the contrast between (3) and (4). This can be treated as another case of obligatory *modal concord* (cf. Geurts & Huitink 2006); i.e. their semantics requires a matching modal expression to combine with, yielding a meaning that corresponds to the contribution of a single modal operator (e.g. 'it is necessary that p'), rather than a "double modal" reading (e.g. 'it is necessary that it is necessary that p'). The fact that *JA* and *ruhig* are licensed in imperatives, as in (2), but not in non-modalized declaratives, as in (4), shows imperatives must contain a modal operator.

Imperatives have modal force – We conclude, contrary to Portner (2005, 2007): (i) imperatives contain covert modal elements and (ii) some imperatives contain covert universal modals, whereas others contain covert existential modals. Although Portner's analysis might be adapted to cover (i), it cannot account for (ii). Example (7a) (which can be paraphrased as in (7b)) is particularly telling: Portner (2007) shows that the modal type of imperatives (i.e. modal base and ordering source) cannot change across subsequent utterances. This is satisfied in (7a) and (7b): Both conjuncts have a *teleological* ordering source (such as "in view of your goals to get a PhD"); however, the first conjunct expresses necessity and the second conjunct possibility (as is evident from (7b)). This cannot be explained under Portner's analysis. In contrast, Schwager (2005) complies with the JA/ruhig facts in claiming that imperatives contain covert modals, but it is too restrictive in assuming they are always universal. It must be modified to assume that the "imperative modal" can be universal or existential. Specifically, Schwager's (2005) pragmatic solution cannot account for all "existential" imperatives, as there are existential imperatives (such as (8a) with the paraphrase (8b)) that need not presuppose the hearer's wish to carry out the action.

Conclusion – Imperatives not only require a syntactic or semantic element introducing modal force, but sometimes express universal force and sometimes existential force.

- (1) a. Parent: We're leaving! *Go to the bathroom!* (≈ must φ) Otherwise you'll have to go in 15 minutes.
 b. Driver: That's ok. *Go ahead and go to the bathroom!* (≈ may φ) We're not leaving before 8PM.
- (2) a. Geh da JA / #ruhig hin! Sonst wirst du bestraft. go there JA #RUHIG to else will.be you punished 'Go [JA / #ruhig] there! Or else you'll be punished.'
 - b. Geh da ruhig / #JA hin! Das ist vollkommen in Ordnung. go there RUHIG #JA to that is completely in order 'Go [ruhig / #JA] there! It's completely ok to go there.'
- (3) a. Du sollst da JA / *ruhig hingehen. b. Du darfst da JA / *ruhig nicht hingehen. you shall there JA *RUHIG go.to
 'You shall [JA / *ruhig] go there.'
 b. Du darfst da JA / *ruhig nicht hingehen. you may there JA *RUHIG not go.to
 'You may [JA / *ruhig] not go there.'
 - c. Du kannst da ruhig /*JA hingehen you can there RUHIG *JA go.to
 You can [ruhig /*JA] go there.'
 Du brauchst da ruhig /*JA nicht hingehen. you need there RUHIG *JA not go.to
 'You need [ruhig /*JA] not go there.'
- (4) a. # Du gehst da JA hin.
 # you go there JA to # 'You go [JA] there.'
 b. # Du gehst da ruhig hin. # you go there RUHIG to # 'You go [ruhig] there.'
- (5) a. Der Flug soll JA um 15h angekommen sein. the flight shall JA at 3PM arrived be 'The flight shall [JA] have arrived at 3PM.' *★ empty modal base & hearsay ordering source* ('In view of hearsay evidence, it is necessary...') *✓ circumstantial m.b. & bouletic o.s.* ('In view of what I want to be the case, it is necessary ...')
 b. Der Oskar kann ruhig der Mörder sein.
 the Oskar can PLUE the murderer he 'Oskar can [ruhig] he the murderer'
 - the Oskar can RUHIG the murderer be 'Oskar can [ruhig] be the murderer.' * epistemic modal base & stereotypical ordering source ('In view of what we know, ...') </ r>
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- (6) Der kann die Schmerzen ruhig aushalten.
 he can the pain RUHIG bear 'He can [ruhig] bear the pain.'
 ✓ *bouletic* ('In view of what I want to be the case regarding what adults should be able to bear..')
 ★ *dynamic* ('In view of standards concerning normal tolerance thresholds for pain..')
- (7) a. Sprich JA oft mit deinem Berater und geh ruhig auch hin und wieder aus! speak JA often with your advisor and go RUHIG also now and again out 'Speak [JA] to your advisor often, and go [ruhig] out every now and then!'
 - b. Du sollst/*kannst JA oft mit deinem Berater sprechen und kannst /*sollst ruhig you shall *can JA often with your advisor speak and can *shall RUHIG auch hin und wieder ausgehen! also now and again go.out
- (8) a. Greif den Frosch ruhig an! Der tut dir nichts. touch the frog RUHIG PRT it does you nothing 'Touch [ruhig] the frog! It won't hurt you.'
 b. Du kannst/*sollst den Frosch ruhig angreifen! Der tut dir nichts.
 - b. Du kannst/*solist den Frosch runig angreifen! Der tut dir nichts.
 - you can *shall the frog RUHIG touch it does you nothing

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