On the impersonal use of German personal pronouns

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Abstract

Already considerable effort has gone into determining a unified semantics for personal pronouns that accounts for their bound and referential interpretations (cf. Heim 2005, Kratzer 2009). Impersonal interpretations of personal pronouns have been mostly neglected in this discussion, though. The aim of this paper is to contribute to filling this gap focusing on German impersonal *ich* (1p.sg.) and impersonal *du* (2p.sg.). I review the criticism against direct-reference accounts based on Kaplan (1978) and show their inadequacy to account for impersonal interpretations. I then analyze the semantic and pragmatic behavior of the two impersonally interpreted German pronouns. As an alternative to direct-reference accounts, I adopt Nunberg's (1993) three-component account and I modify it by drawing on the results in Malamud (2007), Moltmann (2006, 2010) and the feature-based accounts in Heim (2005) and Kratzer (2009). Lastly, I apply the account to the deictic interpretation of personal pronouns.

1.   Introduction

In recent years considerable effort has been put into determining a unified semantic theory of personal pronouns that captures their distinct possible interpretations, i.e. *referential, bound* and *impersonal* (cf. Heim 2005, Kratzer 2009, Malamud 2006, 2007 among others). At the center of this discussion has predominantly been the issue of accounting for the systematic ambiguity of personal pronouns between a bound and referential interpretation.

(1)   a.   *I like tomatoes.*   (deictic interpretation of *I*)
       b.   *Only I_k did my_k homework.*   (bound interpretation of *my*)
             (Heim 2005:6)

The integration of the third impersonal interpretation into the picture has been mostly neglected, though. Yet quite a number of languages allow impersonal interpretations of personal pronouns. At least among the Germanic languages, an impersonal use of second person singular pronouns is very common (cf. Bennis [2004] on Dutch *je*, Kitagawa and Lehrer [1990] and Malamud [2006, 2007] on English *you*, Malamud [to appear] and Gruber [2010] on German *du*, Fremer [2003] on Swedish *du*).

(2)   *If you as a team want to win, you have to fight.*   (impersonal you)

In this paper, I focus on German, which differs from English in that it allows for an impersonal interpretation of the first person singular pronoun *ich* in addition to the second person singular pronoun *du*. The sentences in (3) and (4) provide typical examples.

(3)   *Wenn ich als Mannschaft gewinnen will,   muss ich   kaempfen.*
        if   I   as team   win   want must I   fight
        (impersonal *ich*, 1p.sg.)

(4)   *Wenn du   als Mannschaft gewinnen will,   musst du   kaempfen.*
        if   you as team   win   want must   you   fight
        (impersonal *du*, 2p.sg.)

With an impersonal interpretation of *ich* and *du*, both examples express the same general statement about how teams that want to win have to act (I call this the 'impersonal reading' of the two examples).

The aim of this paper is to analyze the semantic and pragmatic behavior of German impersonal *ich* and *du* and to provide a formal account which captures the impersonal and the deictic interpretation of personal pronouns. This specifically comprises a discussion of the restrictions on the interpretation and use of impersonal *ich* and *du*, and the relative differences between the two pronouns in these respects. On the basis of German, I intend to establish that the impersonal interpretation of personal pronouns is connected to specific linguistic and extra-linguistic contexts, and to show that there is a systematic ambiguity between deictic and impersonal interpretations of personal pronouns which merits a unified analysis.

The paper is organized as follows. Section 2 provides a critical assessment of direct-reference accounts based on Kaplan (1978). I show that such an account makes the wrong prediction for impersonally interpreted personal pronouns. I present two independent problems for direct-reference accounts presented in the literature (cf. Heim 2005, Kratzer 2009, Nunberg 1993) and further discard an — at first sight plausible — account for impersonally interpreted personal pronouns that tries to maintain a direct-reference account by appealing to a counterfactual semantics. In Section 3, I provide an overview of the semantic and pragmatic restrictions on the German impersonal uses to establish the systematic behavior of impersonal interpretations. And the following section, I propose a formal account for impersonal uses of personal pronouns based on Nunberg (1993), which captures the observations made before. In addition, I briefly discuss how the pro- posed account for the impersonal interpretation can be extended to model the deictic interpretation and the problematic data found in Nunberg (1993).

2.   Inadequacy of direct-reference accounts

2.1.   *Direct-reference accounts and their predictions*

Before I discuss direct-reference accounts[1] of pronominal meaning, a word has to be said about examples allowing for impersonal interpretations of personal pronouns.

An important observation that has to be kept in mind is that pronouns found in examples that allow for an impersonal interpretation are invariably ambiguous between an impersonal and a deictic interpretation.[2] Consider (5-a) and (5-b). If first person singular *ich* is understood as impersonal in (5-a), the sentence expresses a statement on the obligations of farmers in general. Yet, if *ich* is interpreted as deictic, we learn about the obligations of the speaker as a farmer. An analogous ambiguity between a deictic and impersonal interpretation is observable for (5-b), as well.

(5)   a.   *Ich muss als Bauer meine Kühe melken.*   (1p.sg.)
               I   must   as   farmer   my   cows   milk
        b.   *Du musst als Bauer deine Kühe melken.*   (1p.sg.)
               You   must   as   farmer   your   cows   milk

With that said, I now turn to direct-reference accounts of pronominal meaning based on Kaplan (1978), who developed his account to adequately capture the deictic interpretations of personal pronouns.[3] The central feature of Kaplan's account and later variants is that first and second person singular pronouns directly pick their referents from the context, i.e. they are functions from contexts to individuals in the context, see (6). In other words, the determination of the referent does not depend on an intermediary intension like '*the speaker of this utterance*' or the like.

(6)   a. $[[\, ich/I \,]]^c = \text{speaker}(c)$
       b. $[[\, du/you \,]]^c = \text{addressee}(c)$

Here the parameter c on the interpretation function models the context of evaluation as proposed by Kaplan (1978), which contains at least the utterance location, utterance time, and the participants.

From this short review of direct-reference accounts the prediction for impersonal interpretations of personal pronouns is evident. If the semantic value of a pronoun is automatically fixed to the speaker or the addressee of the context, it is not clear how general statements about farmers or teams, for example, can ever arise. Without further work only the deictic interpretations are accounted for.

2.2.   Two independent problems for direct-reference accounts

Two independent problems for direct-reference accounts have been previously discussed in greater detail (cf. Heim 2005; Kratzer 2009; Nunberg 1993).

First, direct-reference accounts fail to account for bound variable readings of first and second person pronouns (Heim 2005; Kratzer 2009). Example (7) shows a bound variable reading of first person singular *I*.

(7)   *Only I_k did my_k homework.*
      (Heim 2005:6)

The bound reading of (7) states that nobody except the speaker did their homework, where the homeworks co-vary with the individuals. For direct-reference accounts a reading other than '*Nobody except the speaker did the speaker's homework*' is unexpected, since direct-reference accounts assign to every occurrence of first and second person singular pronouns with the speaker and the hearer respectively.

The second problem for direct-reference accounts stems from Nunberg's (1993) observation that *indexicals* (e.g. personal pronouns, demonstratives ...) allow *deferred ostension*, which is illustrated in (8) for first person singular *I*.

(8)   The condemned prisoner:
      I am traditionally allowed to order whatever I like for my last meal.
      (Nunberg 1993: 20)

Since there can never be a tradition of last meals for one specific person, Nunberg concludes that the pronoun *I* in (8) does not refer to the speaker. Instead, what the speaker of (8) wants

to convey is that there is a tradition for condemned prisoners which in this situation applies to him. It is unclear how a direct-reference account can capture this reading.

In the following section, I briefly sketch an account that interprets impersonal readings as counterfactual ones, which has been suggested to obviate the evident problem of the direct-reference accounts with impersonal interpretations of personal pronouns (p.c. Angelika Kratzer, Magdalena Schwager). As I will show now, though, this reinterpretation step runs into problems as well.

2.3. *Against a counterfactual account*

As stated in the introduction, impersonal interpretations of second person singular pronouns are quite common among languages, contrary to impersonal first person singular pronouns. In fact ever since Kaplan (1978), first person singular pronouns have enjoyed the status as *pure indexicals*, i.e. expressions that always and automatically pick their referents from the context, for which impersonal interpretations should be impossible.

As we just saw, this assumption is incompatible with impersonal readings. In order to alleviate this problem, one may assume that sentences with impersonally interpreted pronouns are underlyingly counterfactuals.[4] For example, (9-a) would be assigned an interpretation along the lines of (9-b).

(9) a. *Wenn ich als Mannschaft gewinnen will, muss ich kaempfen.*
         if   I   as   team   win   want   must   I   fight
     b. *If I were a team and wanted to win, I would have to fight.*

The counterfactual account faces (at least) four problems. First, impersonal interpretations are not restricted to personal pronouns that occur in conditionals.

(10) *Ich   muss   als   Mannschaft   auf   meinen   Trainer   hören.*
      I   must   as   team   part my   coach   obey
      '*One as a team has to obey one's coach.*'

Clearly, (10) is not a conditional and neither is (5-a). Nevertheless impersonal interpreta tions for these three examples are available. This means that for mono-clausal examples either a covert counterfactual structure has to be stipulated, or the counterfactual interpretation has to be provided by some expression in the sentence, e.g. the *als* -phrase ('*als*' - Engl. '*as*'). In any case, it has to be explained how (10) receives the interpretation in (11).

(11) *If I were a team, I would have to obey my coach.*

Second, *als*-phrases are not obligatory for the impersonal interpretation to be available. The impersonal reading is, however, facilitated by co-occurring *als*-phrases.5[5] Consider (12-a) and (12-b). Without further contextual support, an impersonal interpretation is more readily available for (12-a) than for (12-b). However, if it is clear that the topic of the conversation is teams and their obligations, (12-b) is as easily read impersonally as (12-a).

(12)   a.   *Ich   muss als Mannschaft auf meinen Trainer hören.*
                I   must as team   part my   coach   obey
                '*As a team, one has to obey one's coach.*'

    b.   *Ich   muss auf   meinen   Trainer hören.*
                I   must part my   coach   obey
                '*One has to obey one's coach.*'

Third, *als*-phrases can not express a counterfactual predication relation in the antecedent of a conditional or counterfactual, see (13). It is infelicitous to continue (13) with ' *But since Peter is not a farmer...*'.

(13)   *Wenn Peter als Bauer ein Schaf gekauft hätte, hätte er Wolle machen können.*
        if   Peter as farmer a   sheep bought had   had he wool make   could
        '*If Peter as a farmer had bought a sheep, he could have made wool .*'

In fact, *als*-phrases in general express a presupposition-like predication (cf. Jäger's [2002] analysis of English *as*-phrases which are the literal translation of German *als*-phrases). For the counterfactual account, though, the *als*-phrases appearing in the above examples would have to be interpreted counterfactually to give the intended interpretation.

And fourth, overt counterfactuality blocks an impersonal interpretation for personal pronouns in German. The conditionals that impersonal uses occur in are — across the board — indicative conditionals.

(14)   ?*Wenn ich als Mannschaft gewinnen wollen würde, dann müsste ich*
        if   I as team   win   want   would then must   I
        motiviert   auf   den   Platz   gehen.
        motivated   on   the   field   go

The first person singular pronoun *ich* in (14) can only be interpreted deictically and the example in its entirety can only be understood in the marked context where the speaker alone constitutes a team: '*If I as a team would want to win, then I would have to enter the field motivated*'. This is completely unexpected if the impersonal readings are assumed to be hidden counterfactuals.

Given these four counterarguments, one has to conclude that the counterfactual account in the above form is not the right analysis for sentences containing impersonally interpreted personal pronouns. Thus it is reasonable to presume — as I will do for the remainder of this paper — that the impersonal interpretation of first and second person singular pronouns constitutes a genuine, independent interpretation that needs to be differentiated from the deictic interpretation.

Several proposals have been pursued along this line. Heim (2005) and Kratzer (2009), who focus on bound variable readings of personal pronouns, propose a feature-based semantics — the meaning of pronouns is built up compositionally from interpretable morphosyntactic features. Nunberg proposes a more complex semantics for personal pronouns to account for the deferred ostension readings. In Section 4, I adopt Nunberg's approach as my basis for the impersonal interpretations of German *ich* and *du*, and establish a connection to the feature-based proposals of Heim and Kratzer.

3.   Semantic and pragmatic (dis)similarities

3.1.   Truth-conditional equivalence

As was hinted at in the introduction, impersonal *ich* and impersonal *du* are truth-conditionally equivalent. The examples (3) and (4), repeated below as (15) and (16), express the same general obligation for teams that want to win, independent of the specific pronoun. A paraphrase of their shared meaning is given in (17). The choice of pronoun does not depend on semantic but on pragmatic considerations, the discussion of which will be deferred to Sections 3.4 and 3.5 for now.

(15)   *Wenn ich   als   Mannschaft gewinnen will,   muss   ich   kaempfen.*
       if   I   as   team   win   want   must   I   fight
       (impersonal *ich*, 1p.sg.)

(16)   *Wenn du   als Mannschaft gewinnen will,   musst   du   kaempfen.*
       if   you as team   win   want   must   you   fight
       (impersonal *du*, 2p.sg.)

(17)   *If a team wants to win, it has to fight.*

A related observation is that proper impersonal pronouns can be substituted *salva veritate* for impersonally interpreted personal pronouns. In example (18), the personal pronouns were replaced with the German proper impersonal pronoun *man* (Engl. '*one*'), yet (18) can be paraphrased as (17), too. This implies that the truth-conditional import of impersonally interpreted personal pronouns is, at least in these examples, identical with the import of proper impersonal pronouns.

(18)   *Wenn man   als Mannschaft gewinnen will,   muss   ich   kaempfen.*
       if   one   as team   win   want   must   I   fight
       (impersonal *man*)

The truth-conditional equivalence and the connection to proper impersonal pronouns are the striking properties that a theory of impersonally interpreted personal pronouns has to capture. Another desideratum for such a theory is to account for the shared semantic restrictions placed on the impersonal interpretations of German first person singular *ich* and second person singular *du* (Sections 3.2 and 3.3). Despite these strong ties, notable differences with respect to pragmatic effects are found (Sections 3.4 and 3.5).

3.2.   Episodic statements

Both *ich* and *du* are subject to semantic restrictions on the impersonal interpretation. In fact, these restrictions can be found in languages other than German, too (cf. Bennis 2004 on Dutch *je*, Kitagawa and Lehrer 1990 and Malamud 2006, 2007 on English *you*, Fremer 2003 on Swedish *du*).

Impersonal interpretations of personal pronouns are blocked in episodic sentences, i.e. sentences that describe an event or situation at a specific time and place. Any personal pronouns in such sentences have to be interpreted deictically, see (19).

(19) a. *Ich   habe   gestern   als Bauer   meine   Kühe   gemolken.*
         I   have   yesterday as farmer   my   cows   milked
         Only available: '*Yesterday, the speaker milked his cows as a farmer.*'
     b. *Du   hast   gestern   als Bauer   deine   Kühe   gemolken.*
         you   have   yesterday as farmer   your   cows   milked
         Only available: '*Yesterday, the hearer milked his cows as a farmer.*'

This restriction also applies to proper impersonal pronouns, though the German and English proper impersonal pronouns act differently in episodic sentences. While English *one* is ungrammatical (cf. (20)[6]), German *man* loses its impersonal interpretation (Kratzer 1997; cf. (21)).

(20)   *#Yesterday, one milked his cows.*

(21)   *Man   hat   gestern   seine   Kühe   gemolken.*
        one   has   yesterday one's   cows   milked
        Only available: '*Yesterday, some people milked their cows.*'

The meaning of non-impersonal *man* can be approximated by '*someone/some people*' (possibly including the speaker). With respect to the German data, a similar behavior and similar interpretations have been reported for proper impersonal pronouns in episodic contexts in other languages as well (cf. Cinque [1988] on Italian *si*, Egerland [2003] on Swedish *man* ...). Unfortunately, a thorough discussion of non-impersonal proper impersonals in episodic statements is beyond the scope of this paper (cf. Malamud [to appear] for a discussion on *man*).

3.3.   Adverbials and deictically interpreted personal pronouns

Impersonal uses of personal pronouns also place restrictions on the co-occurrence of temporal and spatial adverbials, which are connected to the unavailability of impersonal interpretations in episodic contexts.

In general, neither temporal nor spatial adverbials force an episodic interpretation for the sentences in which they occur (cf. Krifka et al. 1995). Whether an adverbial creates a bias towards an episodic interpretation depends on the content of the entire sentence. This is illustrated in (22) and (23).

(22) a. *#Here in my office, basketball players are over two meters tall.*
     b. *#This month, basketball players are over two meters tall.*

(23) a. *Here in my office, articles miraculously disappear.*
     b. *This month, mayflies lay their eggs near the Leine river.*

The sentences in (22) are infelicitous as generic statements about basketball players since the adverbial expressions here in my office and this month restrict the domain of quantification in a way that a generalization becomes unavailable. In contrast, the adverbial expressions do not restrict the domain of quantification as radically in (23) and both sentences can express generalizations.

The same pattern is observable with impersonal uses of personal pronouns. The examples in (24) show the same sentence with two different temporal expressions. For the first example an impersonal interpretation is unavailable, while the second example can easily be interpreted impersonally.

(24) a. *Heute habe ich doch als Bauer meine Kühe gemolken.*
today have I PART as farmer my cows milked
Only available reading: '*Today, I as a farmer milked my cows.*'

b. *Im 15. Jahrhundert habe ich doch als Bauer meine Kühe gemolken.*
in-the 15 century have I PART as farmer my cows milked
Impersonal reading: '*In the 15th century farmers milked their cows.*'

A second co-occurrence restriction is placed on deictically interpreted personal pronouns. Two tokens of the same personal pronoun which co-occur in a sentence can not receive two different interpretations. That is to say, it is impossible for one occurrence to be interpreted impersonally while the other occurrence is interpreted deictically (cf. Gruber 2010). For instance, (25) cannot be interpreted such that there is an obligation for farmers to look after the speaker, nor that the speaker has an obligation to look after farmers.

(25) *Ich muss doch als Bauer auf mich aufpassen.*
I must PART as farmer me look-after

Analogously, a sentence in which a deictic use of a personal pronoun co-occurs with an impersonal use of a different pronoun is marginal at best.

(26) #/? *Ich muss dich als Angestellter höflich behandeln.*
I must you as employee politely treat

Curiously, possessives seem to behave differently.[7] According to my German consultants, it is possible for examples (27-a) and (27-b) to interpret the personal pronoun in subject position impersonally and the possessive deictically.

(27) a. *Ich kann doch deine Cousine heiraten.*
I can PART your cousin marry

b. *Du kannst doch deine Cousine heiraten.*
you can PART your cousin marry

Unfortunately, speaker intuitions for these examples are shaky. A Google search for relevant data did not return any examples for impersonally interpreted personal pronouns co-occurring with deictically interpreted personal pronouns.[8] Of course, this result has to be viewed with a grain of salt. A lot of empirical work remains to be done regarding the differences between deictically interpreted personal pronouns in object position and their possessive counterparts.

At this point, then, I can only hypothesize about what might underlie the restriction on different co-occurring, deictically interpreted personal pronouns. Deictic uses might introduce a bias for an episodic interpretation in the same way adverbials do, depending on the identity of the speaker or addressee. In other words, it might be odd to have a special rule of conduct with respect to an 'ordinary' person. The oddness is expected to disappear, though, if the referent of the deictic use is 'important enough' for special rules to apply to him or her. As mentioned above, this conjecture requires further empirical work.

In comparison, proper impersonal pronouns do not place restrictions on co-occurring deictically interpreted personal pronouns. This is puzzling, since we saw before that their meaning does not differ from that of impersonally interpreted personal pronouns. The pronouns *mich* (Engl. '*me*' acc.) and *dich* (Engl. '*you*' acc.) can be interpreted deictically without any effort.

(28) *Man   muss   mich/dich   als Angestellter   höflich   behandeln.*
        one   must   me/you   as employee   politely   treat
        '*As an employee, one has to treat me/you politely.*'

The interpretation of co-occurring personal pronouns, in general, has no influence over the interpretation of *man*.

3.4.   *Emotional focus and emotional involvement*

Let us now turn to the pragmatic effects connected with impersonally interpreted *ich* (1p.sg.) and *du* (2p.sg.), we see the two pronouns behave differently for the first time, although both influence the same pragmatic aspects.

I first note that impersonal *ich* and *du* manipulate specific emotional foci. An emotional focus, I propose, is a nominal expression for which an emotional attitude is communicated. In principle, one may have an emotional attitude (eg. sympathy, empathy, anger ...) towards any referent of a nominal expression occurring in a sentence. An example for this attitude being communicated by a speaker is the use of expressive adjectives like *damn* (cf. Potts [2007] on expressives). However, both the term 'emotional focus' itself and the characterization of the pragmatic effect based on it have to be taken with a grain of salt, as I only introduce the term in an effort to give a more precise description of the intuitions connected to the (possibly underlying) pragmatic effect. Whether the notion of emotional focus has linguistic or psychological reality remains to be investigated.

Impersonal *ich* sets an emotional focus for the speaker on the group of individuals that are denoted by impersonal *ich*. This specifically means that, whenever impersonal *ich* is used, the speaker communicates heightened emotional involvement and an emotional attitude towards the individuals picked out by the pronoun.

In examples found on the Internet, impersonally used *ich* is usually accompanied by expressive language and further indicators of heightened emotional state, e.g. capitalizations, a frequent use of exclamation marks and the use of expressive lexical items (cf. Potts and Schwarz 2010). Example (29), which is an actual example taken from an internet platform, illustrates this.

Context: How much money do you give as a present at a wedding? - The initial question is whether 100 Euro is enough. One user argues that it is customary to adjust the amount of money relative to the size and cost of the wedding party held by the bridal couple.

(29) *Ich find   das ist ein total   doofes Argument! **Ich** kann doch als*
        I   think   this is   a   totally   stupid argument   I   can   part as
        *Brautpaar   nicht von **meinen** Gasten   erwarten,   dass sie **mir***
        bridal-couple   not   from my   guests   expect   that they me
        quasi   die   Feier finanzieren!
        more-or-less   the   party finance
        '*I think this is an absolutely stupid argument! The bridal couple can't expect their guests to more or less pay for the party!*'[9]

In the first sentence of (29) the speaker states her personal opinion on a previous argument. But then the speaker switches to impersonal *ich* in the second sentence when she talks about bridal couples in general.

Similarly, impersonal *du* manipulates the hearer's emotional focus. Since the speaker can not

directly manipulate the emotional attitudes of the hearer towards specific individuals just by uttering some linguistic expression, the effect of impersonal *du* is to invite the hearer to share the speaker's emotional attitude towards the individuals picked out by the pronoun.

For English impersonal *you* the connection to emotional involvement has been noted by Kitagawa and Lehrer (1990) and Malamud (2007). More specifically it is observed in Malamud (2007) that the use of English impersonal *you* and German impersonal *du* has a certain invitational character which she shows with the help of a phenomenon she calls *empathy tracking*.[10]

According to Malamud, empathy tracking can be observed when impersonal second person pronouns co-occur with proper impersonals in a sentence. It means that the addressee is asked to 'empathize' (Malamud's terminology; i.e. share an emotional focus with the speaker) with different groups of people, depending on which argument positions of the verb are filled by impersonal *you* and generic *one*. Consider the two examples in (30).

(30)

    a.   ***One*** *could have thrown **you** in jail for that.*   (empathy with object)
    b.   ***You*** *could have thrown **one** in jail for that.*   (empathy with subject)
(Malamud 2007: 11)

By giving analogous examples in German, Malamud shows that the observations made for impersonal *you* hold for German impersonal *du*, too. The following examples are the literal[11] translations of the English examples in (30).[12] These examples also show an empathy tracking effect.

(31)   a.   ***Man*** *hätte* ***dich*** *dafür ins   Gefangnis   werfen   konnen.*
            one   had   you   for-this   in-the   jail   thrown   could
            'One could have thrown you in jail for that.'   (empathy with object)
    b.   ***Du*** *hättest* ***einen*** *dafür ins   Gefangnis   werfen   konnen.*
            you   had   one   for-this   in-the   jail   thrown   could
            'You could have thrown one in jail for that.'   (empathy with subject)

Since German also allows an impersonal interpretation for first person singular *ich*, I tested my consultants as to whether Malamud's (2007) empathy tracking idea can be generalized to any two distinct impersonally interpreted pronouns. That this is the case is shown in example (32) for impersonal *ich* and the proper impersonal pronoun *man*.

Context: Typos in a job ad at a job agency; user A is upset about the typos. User B says that the person placing the ad probably is not responsible for the typos and blames the job agency employees.

(32)   A: *Aaaaber mal ehrlich,   wenn* ***ich*** *als   Arbeitgeber eine Stellenanzeige aufgebe,*
            but-wait   honestly,   if   I   as   employer   a   job-ad   place
            dann checke ***ich*** *doch wenn das Ding online ist, ob   auch alles*
            then   check   I   part   when   the   thing   online   is   whether part   everything
            stimmt. Jedenfalls, wenn ***ich*** *ein Arbeitgeber bin, bei dem   **man** arbeiten*
            is-right   in-any-case   if   I   an   employer   am   for   whom   one   work
            will.
            want.
            A: *'But wait, honestly, if an employer places a job ad, then he has to double-check online whether the ad is fine. At least, if it's an employer one wants to work for.'*[13]

In this example the speaker's emotional focus are the employers, for which he uses impersonal *ich* (1p.sg.), rather than the potential employees, for which he uses *man*.

The two empathy tracking examples that contrast *man* with impersonal *ich* and *du* suggest that man does not manipulate the speaker's or the hearer's emotional focus.[14] This result concurs with native speaker judgments that judge statements containing impersonal *ich* or *du* as subjective, while sentences containing the proper impersonal *man* are perceived as objective.

3.5. Preferences for certain discourse contexts

Impersonally interpreted personal pronouns occur more frequently in some discourse contexts than in others. For example, impersonal *ich* (more so than impersonal *du*) is decidedly odd in sentences uttered out-of-the-blue. Just as with the empathy tracking results, the proper impersonal *man* has no preferences for specific extra-linguistic contexts. Impersonal *ich* prefers contexts where the prescriptive statement expressed by the sentence containing the pronoun is violated or contested — a negative context. The context-data-pair in (29), repeated here in (33), illustrates impersonally interpreted *ich* in a negative context.

Context: How much money do you give as a present at a wedding? - The initial question is whether 100 Euros is enough. One user argues that it is customary to adjust the amount of money relative to the size and cost of the wedding party held by the bridal couple.

(33) *Ich find das ist ein total doofes Argument!* **Ich** *kann doch als*
      I think this is a totally stupid argument I can part as
      Brautpaar nicht von **meinen** *Gästen erwarten, dass sie* **mir**
      bridal-couple not from my guests expect that they me
      quasi die Feier finanzieren!
      more-or-less the party finance
      `*I think this is an absolutely stupid argument! The bridal couple cant expect their guests to more or less pay the party!*'[15]

The example responds to a post by another user which says that the guests have to adjust the given sum to the size and style of the wedding party chosen by the bridal couple. The author of (33) infers from this that the author of the last post thinks that the bridal couple can in fact expect their guests to pay the party expenses. Thus, the opinion expressed in the second sentence in (33) has been implicitly negated in the context. Or in other words, the speaker of (33) contests an opinion implicitly stated in the context. A more in depth characterization of negative contexts is given in Zobel (2010).

The affinity of impersonally interpreted *ich* for negative contexts could be explained by drawing on the observation that impersonal *ich* sets the speaker's emotional focus. One might conjecture that the context needs to provide 'enough incentive' for the speaker to communicate his emotional attitudes, e.g. by not conforming to the speaker's opinions or expectations. Yet, a connection between preferred contexts and emotional foci can only be sketchy and *ad hoc* (this extends to impersonal *du*) given the vague and stipulative nature of 'emotional focus'.

On the basis of impersonal *you*, Kitagawa and Lehrer (1990) and Malamud (2007) describe the preferred contexts for impersonal second person pronouns as contexts where the speaker expects the hearer to share his opinion and to subscribe to the his statement. I call these contexts for impersonal *du* '*positive contexts*'. The context-data-pair in (34) illustrates such a

positive context.

Context: During an interview, the coach of the German ice hockey national team talks about the frequency of situations in which weaker teams beat stronger teams in sports (he calls this a 'fact'). He says that being the stronger team is not enough to automatically win and continues with (34).

(34) *Du musst als Mannschaft einfach mehr gewinnen wollen als   der Gegner.*
       you must as team   simply more win   want   than the opponent
       '*As a team your wish to win simply has to be greater than your opponent's.*'[16]

Before the speaker utters (34), he talks about something he considers a universal fact. The continuation in (34) is stated in the same mood — as a general fact that the speaker expects the hearer to accept.

The interaction of positive and negative contexts is illustrated in the following example, which features impersonal *ich* and *du* used contrastively to argue for two opposing points of view.

Context: Discussion about a news item: a 10 year old Belgian girl is pregnant. The father is her 13-year-old friend. B thinks the parents breached their duty of supervision.

(35) a. A: *Ich meine - **du** kannst **dein** Kind ja   nicht auf Schritt und Tritt*
              I   mean   you can   your child PART not wherever-he/she-goes
              verfolgen.
              follow
          A: '*I mean, one can't always follow one's child around.*'
      b. B: *Klar, aber **ich** muss doch als Eltern merken, wenn **mein** Kind sich*
              sure but I   must PART as parents notice if   my   child
              schon über   solche Sachen Gedanken macht.
              already about such   things wonders
          B: '*Sure, but as parents one has to notice, if ones child already wonders about such things.*'[17]

The first sentence uttered by A contains impersonal *du*, which prefers positive contexts. Even though A knows that B blames the parents, A tries to get B to share A's emotional attitude towards the speaker and expects B to agree with her statement that parents can not follow their children around all the time. With her statement A implies that the pregnancy must have happened when the parents were not present so they might not have been able to stop their daughter. In her answer to A, B concedes that, indeed, parents can not follow their children around all the time ('*klar*' - Engl. '*sure*'). But in her continuation she states that in her eyes it is already a breach of duty of supervision if parents do not pay enough overall attention to their children, i.e. parents that paid enough attention to their children would notice if they start to wonder about sexuality. The negative context for impersonal *ich* in B's statement is A's attempt to change B's mind about the parents' actions which lets B conclude that not paying enough overall attention to one's children is not a breach of duty of supervision for A.

3.6. Summary and comparison

Let me summarize the previous results.

It was shown that impersonal *ich* and impersonal *du* are truth-conditionally identical and have the same truth-conditional import as the proper impersonal pronoun *man* in the

sentences that allow for an impersonal interpretation. Impersonal *ich, du* and *man* also share being blocked from episodic statements and the semantic restrictions placed on co-occurring adverbials. The impersonally interpreted personal pronouns differ from *man,* though, with respect to the restrictions based on co-occurring deictically interpreted personal pronouns.

All three pronouns also show different pragmatic effects. The impersonally used personal pronouns have the ability to manipulate the emotional focus of the speaker or the hearer, whereas *man* is neutral in this respect. Regarding the discourse context it occurs in, the proper impersonal *man* has no specific preferences, either. Impersonal *ich* and impersonal *du*, though, predominantly occur in negative contexts and positive contexts, respectively.

	in episodics	adverbials	deictic pron.	emotional focus	preferred context
ich	blocked	restricted	restricted	speaker	negative
du	blocked	restricted	restricted	hearer	positive
man	blocked	restricted	unrestricted	none	none

Table 1: The differences between impersonally interpreted *ich* (1p.sg.) and *du* (2p.sg.) and the proper impersonal *man*

4. Complex Personal Pronouns

4.1. *Indefiniteness of impersonally interpreted personal pronouns*

Personal pronouns are traditionally categorized as definite expressions since the deictic interpretations of personal pronouns behave similarly to other referential expressions (e.g. proper names, definite descriptions) in the classical definiteness tests (Abbott 2004). But I show that the impersonal interpretations of personal pronouns in fact behave like indefinite expressions.

As discussed in 3.1, impersonally interpreted personal pronouns have the same truth-conditional import as proper impersonal pronouns. Hence it can be safely assumed that impersonal interpretations share formal properties with proper impersonals. Let us look at the account for proper impersonal pronouns discussed in Moltmann (2006, 2010). Moltmann (2006, 2010) offers a comprehensive analysis of English *one*, the direct translation of German *man*. She proposes that *one* introduces a (complex) free variable ⟨*x, λz[z = y]*⟩. The first component *x* is bound by a genericity operator GEN at the sentence level. The second component formalizes a certain kind of speaker simulation found with *one*, which can be neglected at this point (cf. Moltmann [2006, 2010] for further details). The complete interpretation of sentences containing *one* is given in (36). The formula (modulo the relation given in the second component) can be paraphrased as '*All relevantly normal individuals x are such that P (x)*'.

(36) $\lambda y.$ GENx $P(\langle x, \lambda z[z = y]\rangle)$
      (adapted from Moltmann 2006: 272)

This interpretation is — apart from the complex variable — the interpretation proposed for indefinite singular generic sentences in Krifka et al. (1995) (cf. Greenberg[2007] for a more recent analysis). This kind of generic sentence expresses a generalization for the set of individuals denoted by the indefinite singular expression in subject position. For example the

interpretation of (37-a) as formalized in (37-b) is that all relevantly normal individuals *x* are such that if *x* is a cat then there is a tail *y* that *x* has. Or in other words, all relevantly normal cats have a tail.

(37) a. A cat has a tail.
  b. GEN[*x;y*](*x* is a cat; *y* is a tail & *x* has *y*)
  (Krifka et. al 1995: 43)

Thus Moltmann's account treats *one* as an indefinite expression, which can consequently be taken as a reason to propose an indefinite meaning for impersonally interpreted personal pronouns, too.

A second consideration that points towards an indefinite semantics for impersonally interpreted personal pronouns is put forth in Malamud (2007). She shows that impersonal second person pronouns as well as proper impersonals are subject to quantificational variability effects. Consider (38) and (39).

(38) *In those days, you usually/rarely lived to be 60.*
  (Malamud 2007: 6)

(39) *Damals ist man normalerweise/selten älter als 60 geworden.*
  back-then is one usually/rarely older than 60 become
  '*In those days, one usually/rarely lived till 60.*'
  (based on Malamud 2007:6)

The literal meaning of (38) and (39) is the nonsensical statement that a particular person usually/ rarely lived to be 60. The only plausible interpretation for the two sentences arises when the adverbs usually and rarely are not understood as quantifying over times, but as quantifying over the individuals under discussion. That is, most/few people lived to be 60. This change of quantification domain for the quantifying adverbs is called a quantificational variability effect. Since quantificational variability effects do not arise with definite expressions (cf. [40]), Malamud concludes that impersonal *you* is indefinite.

(40) # *Peter usually/rarely lived to be 60.*

Impersonally interpreted *ich* and *du* also show quantificational variability effects. Both of the following examples have the sensible reading '*Back then, most/few people lived till 60*' in addition to the implausible literal interpretation.

(41) *Damals bin ich normalerweise/selten älter als 60 geworden.*
  back-then am I usually/rarely older than 60 become

(42) *Damals bist du normalerweise/selten älter als 60 geworden.*
  back-then are you usually/rarely older than 60 become

The two arguments above suggest that impersonal uses of personal pronouns are indefinite expressions. This is the center of my account proposed in Section 4.3.

4.2. *Independent proposal for complex personal pronouns*

In Section 2 I discussed various problems for direct-reference accounts, in particular Nunberg's (1993) deferred ostension examples, which feature personal pronouns that do not denote the referents that the direct-reference account predicts for them, as indicated in (43).

(43) The condemned prisoner:
I am traditionally allowed to order whatever I like for my last meal.
(Nunberg 1993: 20)

For reasonable interpretation, the first person singular pronoun can not refer to the speaker of the utterance, as there can not be tradition of the speaker eating anything he wants for his last meal. Nunberg argues that the understood meaning of (43) is captured by the paraphrase in (44).

(44) *The condemned prisoner is traditionally allowed to order whatever he likes for his last meal.*
(Nunberg 1993: 20)

A direct-reference account, Nunberg argues, can never generate these interpretations since all occurrences of *I* are analyzed as invariably speaker-referential. His conclusion is that personal pronouns may also pick out individuals and properties connected to the speaker in the context, rather than just the speaker.

To account for the deferred ostension examples, Nunberg proposes a three-component-account for all types of indexicals (i.e. personal pronouns, demonstratives ...). The semantic value of an indexical is determined by the interaction of three components — a *deictic component*, a *relational component* and a *classificatory component*.

The deictic component picks an entity from the context — the *index* — depending on the respective indexical because of which it resembles the meaning assigned to indexicals in a direct-reference account. The relational component provides a contextually specified relation that relates the index to the final semantic value of the pronoun. This component ultimately determines the final semantic value of the indexical. The classificatory component, finally, contains features that the final semantic value is required to have. These are not only morphosyntactic features, but also 'semantic' features, e.g. features which Nunberg calls quasi-aspectual features.

The three components determine the final semantic value of an indexical as follows. The individual or 'property' that is the final semantic value stands in a certain contextually given relation with an entity in the context and additionally obeys the given featural restrictions. In the specific example in (43), the deictic component picks out the speaker of the utterance, which is then contextually related to the final semantic value, the condemned prisoner.

I adopt Nunberg's three-component account for my formal analysis of the impersonal interpretation *ich* and *du* in the following section as an alternative to the direct-reference accounts, which have been shown to be inadequate for this job. Since Nunberg does not provide a formalization of his account, I briefly review the syntactic and semantic implementation proposed by Elbourne (2008).

Elbourne models the relational component and the deictic component as free variables R and i, respectively. This results in the following complex syntactic structure, which underlies all indexicals (Elbourne 2008:421).

(45) [*indexical* [R i]]
       R … models the relational component
       i … models the deictic component

Elbourne proposes following Heim and Kratzer (1998) in formalizing the morphosyntactic requirements posed by the classificatory component as a presupposition on the final semantic

value of the indexical, but does not spell this out in detail.

The basis for Elbourne's proposed semantics of deictically used personal pronouns are the paraphrases Nunberg gives for his deferred ostension examples. Considering the paraphrase in (44), Elbourne argues that the final semantic value of a pronoun in a deferred ostension reading is an individual concept, i.e. a function from worlds or situations to individuals. Specifically for (43) he proposes that the pronoun denotes the definite description '*the condemned prisoner*'. To generate the individual concept compositionally, he assigns the meaning of the definite article in (47) to the indexicals themselves, as depicted in (46). The values of the free variables R and i are specified contextually in a way such that $R(i)$ denotes the wanted expression of type $\langle se,st \rangle$.[18]

(46) $[[it]]^{g,c} = \lambda f_{(se,st)}.\lambda s.\ \iota x[f(\lambda s'.x)(s) = 1]$
         (Elbourne 2008: 421)

(47) $[[the]]^{g,c} = \lambda f_{(se,st)}.\lambda s.\ \iota x[f(\lambda s'.x)(s) = 1]$
         (Elbourne 2008: 416)

The interpretation of an indexical is computed from the complex structure as in the following example.

(48) $[[\ [\ indexical\ [\ R\ i\ ]\ ]]^{g,c} =$
         $[[indexical]]^{g,c}\ ([[R]]^{g,c}\ ([[i]]^{g,c})) =$
         $\lambda f_{(se,st)}.\lambda s.\ \iota x[f(\lambda s'.x)(s) = 1]\ (R(i)) =$
         $\lambda s.\ \iota x[R(i)(\lambda s'.x)(s) = 1]$

The final meaning in (48) says that personal pronouns pick out the unique individual x that stands in a (situation-dependent) contextual relation R to a deictically picked individual i in the context. Depending on the contextually determined value for R, the final semantic value is a deferred ostension reading or a 'normal' deictic reading. The deictic reading for *I*, for example, is derived by assigning the identity relation, $\lambda y_e.\lambda x_{se}.\lambda s.y = x(s)$, to the variable R and the speaker of the utterance to i.

4.3.   A formal account for impersonal 'ich' and 'du'

Having set the formal basis, I now propose an account for impersonally interpreted *ich* and *du*. In a nutshell, I adopt Elbourne's (2008) proposed structure for Nunberg's (1993) three-component account, but I modify the semantics in a way that it is compatible with the observed indefinite behavior of the impersonal interpretations. The truth-conditional equivalence is relativised in the process to bring the emotional focus effect partly into the semantics. This highlights the shared core of the impersonal and the deictic interpretations. In the end, the impersonal interpretations of *ich* and *du* only differ from each other in the individual picked from the context by the deictic component.

My adaptation of Elbourne's general structure for indexicals is given in (49). To account for the indefinite behavior of the impersonal interpretation, I reinterpret the contribution of the indexical expression in the structure. Instead of providing the meaning of a definite article, the indexical introduces a free variable.

(49) $[\ x\ [\ R\ i\ ]\ ]$
         x … free variable contributed by the indexical
         R … models the relational component
         i … models the deictic component

16

I draw on Moltmann's (2006, 2010) analysis of the proper impersonal *one* and assume that the entire complex structure behaves like an indefinite expression in a generic sentence. That is, the free variable is consequently bound by a genericity operator at the sentence level. The interpretation of an entire sentence containing an impersonally used personal pronoun is thus as in (50).

(50)   Gen[x;]($R(i)(x) \wedge \varphi; \psi$)

The genericity operator I utilize in (50) is the dyadic generic operator discussed in Krifka et al. (1995). The operator relates two open propositions, its *restrictor* and the matrix clause, to each other and specifies which variables are quantified over generically and which are closed existentially. The exact interpretation of the generic operator is at this point not an issue (e.g. quantification over stereotypical or prototypical individuals, a modal operator semantics, ...).

(51)   Gen [$x_1,...,x_i;y_1,...,y_j$](Restrictor[$x_1,...,x_i$]; Matrix[$x_1,...,x_i,y_1,...,y_j$]) $\Leftrightarrow$
        Gen [$x_1,...,x_i;$](Restrictor[$x_1,...,x_i$]; $\exists y_1,...,y_j$ Matrix[$x_1,...,x_i,y_1,...,y_j$])
        (Krifka et al. 1995: 26)

For a complete proposal, the contextual values for the variables R and i still need to be determined since they are necessary to derive the impersonal reading. The deictic component, I propose, picks the same individuals from the context that it does in the deictic interpretation. That is, for impersonal *ich* the speaker of the utterance, and for impersonal *du* the hearer is set as the value of i.

I propose modelling the ability of impersonally interpreted personal pronouns to manipulate emotional foci in the semantics by assigning to R an identification relation in the sense of Moltmann (2010), which relates the individual picked by the deictic component to the generically bound variable x. The result for sentences containing impersonal *ich* and impersonal *du* is given in (52-a) and (52-b), respectively.

(52)   a.   Gen [x;](identifies-with(speaker(c))(x) $\wedge$ φ; ψ)
        b.   Gen [x;](identifies-with(addressee(c))(x) $\wedge$ φ; ψ)

In summary, the interpretations of impersonal *ich* and impersonal *du* are modelled in this account as indefinite expressions that relate a generically quantified variable to the speaker and the hearer, respectively. Even though the two impersonal uses do not come out as completely truth-conditionally equivalent, the account highlights the shared core of the deictic and the impersonal interpretations, which I assume underlies the emotional focus effect.

I now turn to the classificatory component of impersonally interpeted personal pronouns, which has been neglected so far. The felicity of modelling the classificatory component as proposed by Elbourne (2008), i.e. as a presupposition on the entire interpretation, depends on the set of features carried by an impersonally used personal pronoun. As discussed in 2.1, pronouns found in examples that allow for an impersonal interpretation are in fact ambiguous between an impersonal and a deictic interpretation, which suggests that both interpretations share the same morphosyntactic features. In the following discussion I concentrate on the morphosyntactic features and ignore the 'semantic features, which Nunberg (1993) proposes are also contained in the classificatory component.

The usual set of features proposed for first person singular pronouns is {[1st], [singular]}. Let this set be the set of features carried by *ich* in its deictic and its impersonal interpretation. The presuppositional contribution that is usually proposed for these two features in the feature-based accounts is given in (53).

17

(53) a. [[[1st]]]g,c = λx: x includes the speaker in c. x
      b. [[[singular]]]g,c = λx: x is an atom. x
      (Heim 2005: 2)

Placing these presuppositions on the final semantic value of the pronoun leads to the following problem. If these features restrict the final semantic value of *ich* independently of the use, the impersonal reading is not expected to arise. The presupposition expressed by the two features is that the variable — to which the speaker stands in relation R — can only range over singular entities that include the speaker in the context. This essentially comes down to the singular set containing only speaker in the context. Depending on the relation R, $\lambda x.R(\text{speaker}(c))(x)$, is either the empty set, $\varnothing$, or the set containing only the speaker of the context. Neither result is what is needed for impersonal *ich* since impersonally used personal pronouns can be used to make prescriptive statements for sets of singular or plural individuals that do not even have to include the speaker (e.g. bridal couples, teams, parents ...).

There are two possibilities to deal with this problem. Either the classificatory component and the set of morphosyntactic features are distinct sets, or the classificatory component only restricts the values of the deictic component. I propose that the second possibility is the option to be preferred for personal pronouns.[19] That the morphosyntactic features restrict the values for i means in other words that the value of the deictic component is built up parallel to the meaning of deictically used personal pronouns in the feature-based accounts (e.g. Heim 2005, Kratzer 2009), which provides an interesting starting point for further inverstigations.

Apart from the impersonal behavior, my proposal accounts for the restriction on non- episodic statements and the related restriction on temporal and spatial adverbials since the generic operator Gen in (50) introduces generic quantification, which precludes episodic statements (cf. Krifka et al. 1995).

4.4.   The deictic uses

One of the aims of this paper is to contribute to the search for a unified semantic theory for personal pronouns. Hence, I show in this section how the account presented for the impersonal interpretation can be used to model deictic interpretations of *ich* and *du*.

I argue that the deictic interpretation can be captured adequately if the free variable introduced by the pronoun is bound existentially via existential closure, instead of being bound by a generic quantifier. Also, since the classificatory component takes care of the values of i, only an adequate value for R is missing for a complete proposal of the deictic interpretation. Here, I follow Elbourne (2008), in assigning an identity relation, $\lambda y_e.\lambda x_e.y = x$, to R. The interpretation for a sentence containing a deictically used personal pronoun then is as in (54).

(54) $\exists x[i = x \wedge P(x)]$

The explicit interpretations for sentences containing deictic *ich* and *du* are given in (55).

(55) a. $\exists x[\text{speaker}(c) = x \wedge P(x)]$
      b. $\exists x[\text{addressee}(c) = x \wedge P(x)]$

These interpretations are logically equivalent to the meanings that direct-reference accounts give to these sentences. The expression $\exists x[\text{speaker}(c) = x \wedge P(x)]$ is equivalent to P (speaker(c)), since there is only one individual that is identical to the speaker — the speaker himself. Analogously, the expression $\exists x[\text{addressee}(c) = x \wedge P(x)]$ is equivalent to P

18

(addressee(c)).

Since the presented account is based on Nunberg (1993), the deferred ostension readings, which are special cases of the deictic reading, can also be accounted for. The following example illustrates the interpretation of a sentence that contains a deferred ostension reading of a first person singular pronoun.

(56) $\exists x[R(\text{speaker}(c))(x) \wedge P(x)]$

Depending on the contextual value of R, different sets of individuals are quantified over.

5.   Conclusion

In this paper I presented an analysis for the impersonal interpretation of two German personal pronouns, *ich* (1p.sg.) and *du* (2p.sg.). I showed that direct-reference accounts based on Kaplan (1978) fail to capture this interpretation, and I consequently proposed an alternative account based on the one put forth in Nunberg (1993) and insights from Malamud (2007) and Moltmann (2006, 2010).

Although the account was designed only with impersonal *ich* and *du* in mind, it also captures, on closer inspection, the deictic interpretation of these pronouns. In fact, it assigns an interpretation to sentences containing a deictically interpreted pronoun that is logically equivalent to the meaning assigned in direct-reference accounts.

Even though the formal account was developed for the impersonal reading of personal pronouns in German, it is not tied to any specific language. Depending on the semantic and pragmatic behavior of the personal pronouns in other languages, it can be adapted freely to fit the data. This freedom, which is directly inherited from Nunberg's three-component account, is both the strong and the weak point of the present proposal. The restrictions on the deictic and the relational component require further investigation to keep the account from strongly overgenerating. However, the connection between the proposed and feature-based accounts, which was only briefly discussed above, might open up interesting new lines of research in this direction.

Thus, in summary, I have covered not only empirical ground in this paper, but the formal account I have proposed might be one more step towards a unified semantic theory for personal pronouns.

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1 Nunberg (1993) introduces the name 'direct-reference account' as a general term for accounts that are based on Kaplan (1978).

2 The reason why (3) and (4) seem to lack this ambiguity is that the deictic reading of the pronouns is made implausible by the *als*-phrase, *als Mannschaft* (Engl. '*as a team*'). Since one person alone can never constitute a team, the deictic readings of (3) and (4) are dispreferred.

3 In Kaplan's (1978) original account the character of personal pronouns is a function from contexts to contents, which he models as intensions, i.e. functions from worlds to extensions. Nevertheless Kaplan's proposal is a direct-reference account since the content of *I* in a fixed context *c* is the constant individual concept that assigns to each world the speaker in *c*, $\lambda w.$speaker*(c)*. This is equivalent to directly picking out the speaker in *c*.

4 I do not address elaborations of the counterfactual account that argue for the counterfactual meaning being contributed either by the personal pronoun itself or a context shift. The idea of letting the personal pronoun introduce the counterfactual interpretation goes against the assumption at the basis of the counterfactual account — that the meaning proposed by direct-reference accounts is maintained.

An elaboration of the counterfactual account in which the impersonal interpretation arises from context shifted indexicals has to be looked at separately. Such an elaboration introduces an additional assumption on context shift under modality for languages that do not show context shifts under verbs of saying (cf. Schlenker [2003] on 'monsters').

5 The same observation holds also for modal particles, like *doch* (cf. Karagjosova [2004] for an analysis).

6 Example (20) is grammatical if *one* is interpreted as the homophonic numeral. However, this is not a relevant interpretation for the discussion at hand.

7 Malamud (2007) observes the following pattern for impersonal *you*.
(57) In those days, you could marry your cousin.
a. Addressee could marry addressees cousin.
b. One could marry ones cousin.
c. *Addressee could marry ones cousin.
d. One could marry addressees cousin.

8 The reason why a Google search was conducted instead of a proper corpus study is that impersonally used personal pronouns in German are a colloquial phenomenon, which is not used in written German except in transcripts of interviews or in informal discussions on internet platforms. In addition to this stylistic restriction, the impersonal interpretation of first person singular *ich* is largely unstudied and therefore a convenient annotation in corpora — that would allow for a large scale corpus study — can not be expected.

9 http://www.urbia.de/archiv/forum/th-2142726/Wieviel-Geld-zur-Hochzeit-schenken.html

10 As is aptly stated in the following quote taken from Hodges and Klein (2001:438), 'empathy' is a vague term that can interpreted or defined in many different ways.
"There are almost as many definitions of empathy as there are researchers who have studied the topic. They cover a broad spectrum, ranging from feeling a concern for other people that creates a desire to help them [...], experiencing emotions that match another person's emotions [...], knowing what the other person is thinking or feeling [...], to blurring the line between self and other [...]. However, what they share is some description of bridging the gap that exists between the self experience and others' experiences.
"

To escape the vagueness attached to the term, I do not follow Malamud in calling this pragmatic effect found with impersonally interpreted personal pronouns 'empathy'.

11 German *man* has only a nominative form. For all other cases the indefinite pronoun *einer* has to be used.

12 Malamud discusses the following examples which are similar to the ones in (31), but for which impersonal du and man do not co-occur.
(58)   a. *Damals   wäre   man   für   so   etwas   ins   Gefängnis   geworfen   worden.*
       back-then   would   one   for   thus   something   in   jail   thown   was
       '*In those days, one would be thrown in jail for this kind of thing.*' (empathy could go either way)
       b. *Damals   wärst   du   für   so   etwas   ins   Gefängnis   geworfen   worden.*
       back-then   would   you   for   thus   something   in   jail   thown   was
       '*In those days, you would be thrown in jail for this kind of thing.*' (empathize with the victim)
I adapted the examples to show the empathy tracking parallel to the English example.

13 http://www.mediengestalter.info/forum/47/mein-spruch-des-tages-39931-1124.html

14 Moltmann (2006) proposes for English one that it conveys (among other things) generalizations from the speaker's experience. Moltmann argues that a speaker has to 'simulate' the individuals the generalization applies to, i.e. to pretend to be them, if he states generalizations like these. If German *man* — though it is *prima facie* the German counterpart of English *one* — has a similar simulation requirement, the empathy tracking examples contrasting impersonal *ich* (1p.sg.) and *man* suggest that it is not connected to the speaker's emotional attitudes.

15 http://www.urbia.de/archiv/forum/th-2142726/Wieviel-Geld-zur-Hochzeit-schenken.html

16 http://www.netzathleten.de/Sportmagazin/Star-Interviews/Interview-mit-Eishockey-Bundestrainer- Uwe-Krupp-Besser-spielen-als-in-Bern/5761358233643659016/head

17 http://de.answers.yahoo.com/question/index?qid=20070928054833AAl2RG0

18 For simplicity reasons, I use *R* and *i* for both the variables and their contextual values.
19 This assumption might not hold for demonstratives in deferred ostension cases. As Nunberg (1993) observes, the plural demonstratives in (59) can be accompanied with a gesture to single sample plates.
   (59) In a china shop: *These are over at the warehouse, but those I have in stock here.*
   (Nunberg 1993: 24)