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Semantic Case in Urdu

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1 Introduction

Urdu, which is the official language of Pakistan and is spoken in parts of India as well, is very closely related to Hindi. The variety of Urdu examined in this paper is the one spoken in the city of Lahore. This variety must be distinguished from Urdu and Hindi spoken elsewhere in the Indian Subcontinent because it may be developing along different lines due to influence from Punjabi. In particular, as far as we can determine, the ergative infinitive construction examined in this paper is only used by speakers of Urdu from Lahore.

In languages like Urdu, which allow non-nominative subjects, the choice of case marking on these subjects is frequently thought of as an idiosyncratic property of the verb. Although this is possibly so for languages like Icelandic (Andrews (1982), Zaenan et al. (1985)), T. Mohanan (1990) shows that the case marking on subjects in Hindi is predictable on the basis of semantic information. The choice of case can be the result of the assignment of 'semantic' or inherent case, e.g. dative appearing on goals, or as an interaction of grammatical function and semantic factors, e.g. ergative appearing on subjects of perfective verbs exhibiting conscious choice.

Hindi/Urdu has been described as a split ergative language (Dixon (1979)) in that the appearance of the ergative case on subjects of transitive verbs is determined by whether or not they are aspectually perfect. However, discrepancies from the expected split ergative pattern have been pointed out (T. Mohanan (1990)). This paper examines a further discrepancy in the assumed pattern by analyzing the alternation between dative and ergative subjects of an infinitive construction in Urdu.

In order to fully analyze the case marking on the subjects of these constructions, it is necessary to postulate mechanisms that will correctly assign dative and ergative case to other constructions found in Urdu. Following T. Mohanan (1990), we propose that the case marking of these constructions can be explained by the availability of specific semantic information. The generalizations cannot be made solely on the basis of theta roles; it is only by including such notions as conscious choice and abstract event goals that the data can be adequately explained.

1.1 The Dative in Urdu

The dative case in Urdu is homophonous with the accusative *ko*, but it is not difficult to distinguish the two. The dative can appear on indirect objects of ditransitive verbs. (1) is an example of a simple ditransitive sentence in Urdu.

(1) anjum-ne saddaf-ko kitaab dii
Anjum-Erg Saddaf-Dat book-Nom give-Perf
'Anjum gave Saddaf a book.'

The subjects of some verbs like *receive*, *appear to*, *encounter*, or *be able to*, can only appear in the dative, as in (2). These are all verbs in which the subject is a goal or a recipient, although in some cases the notion of goal/recipient must be construed in an abstract sense.

(2) anjum-ko kitaab milii
Anjum-Dat book-Nom receive-Perf
'Anjum received a book.'

In addition, dative subjects can appear on complex predicates of the N-V type. An example of this is given in (3).

(3) anjum-ko kahaanii yaad ayii
Anjum-Dat story-Nom memory-Nom come-Perf
'Anjum remembered the story.'

T. Mohanan (1990) analyzes the constructions in (2) and (3) in depth; for the purposes of this paper, the important observation is that whenever the dative appears on an argument, that argument is a goal/recipient.

Another example of a construction which employs a dative subject involves an infinitive main verb and a modal. (4) is an example of an infinitive combining with a modal to express an action that must be performed.

(4) anjum-ko xat lik^{h}naa paregaa
Anjum-Dat letter-Nom write-Inf fall-Fut
'Anjum must write a letter.'

One of the infinitive constructions we will be concentrating on is similar in meaning and form to (4).

1.2 The Ergative in Urdu

Ergative languages are usually characterized as marking subjects of transitive sentences with the ergative case, thus distinguishing them from intransitive subjects which are marked with the nominative/absolutive case. Some languages further restrict the appearance of the ergative, thus forming a split-ergative pattern. (5a) provides an example typical of a split-ergative language: the sentence is transitive, the verb carries perfective morphology, and the case on the subject is ergative. (5b) is the corresponding present tense sentence in which the subject is not ergative, but nominative.

(5) a. anjum-ne xat lik^{h}aa
Anjum-Erg letter-Nom write-Perf
'Anjum wrote a letter.'

b. anjum xat lik^{h}tii hai
Anjum-Nom letter-Nom write-Imp be-Pres
'Anjum writes a letter.'

When only presented with sentences like (5a) and (5b), a tempting conclusion is that the basic parameter which determines the split ergative behavior is indeed transitivity, while the perfective aspect is an additional condition on its manifestation.

However, the ergative also marks subjects of some intransitive verbs, complex predicates (see Butt (1989)), and an infinitival construction that will be discussed in the next section. A small number of intransitive verbs must take ergative subjects when they appear in the perfective, e.g., *bathe*. These may be lexical exceptions. However, a verb like *roonaa* (to cry), which can take a subject that is either in the nominative, (6a), or in the ergative, (6b), demonstrates that the ergative case marker denotes conscious choice on the part of the agent.

(6) a. anjum royii
Anjum-Nom cry-Perf
'Anjum cried.'

b. anjum-ne royaa
Anjum-Erg cry-Perf
'Anjum cried (on purpose).'

This correlation between the presence of the ergative marker and conscious choice has also been observed in Yidin^{y} by Dixon (1979). In this Australian language, subjects of transitive sentences are in the ergative. However, when a subject is not the "controlling agent" of a sentence, i.e., when conscious

choice over the action is not exercised, a morpheme is added to the verb to indicate that the act was accidental.

In sum, the Urdu system is not a simple split ergative one where transitivity and aspect are the only relevant factors, but rather, there are different constructions which employ the ergative case for the subject. The common denominator is the notion of conscious choice (see Butt (1989) for details).

2 Two Kinds of Infinitive Constructions

This section discusses infinitive constructions in which the difference in case marking on the subject is a direct reflection of the difference in meaning. The (a) examples below express a wish/desire on the part of the ergative subject. The dative marker on the subject in the (b) examples, on the other hand, indicates an obligation on the part of the subject to perform the action. The pairs differ only in terms of the case on the subject, and this difference accounts for the difference in meaning. As will be shown, the ergative construction is another instance of the ergative being linked with conscious choice, while the dative is a recipient of the obligation. Note that the transitivity of the verb does not affect the case marking possibilities.

(7) a. anjum-ne xat likʰnaa hai
Anjum-Erg letter-Nom write-Inf is
'Anjum wants to write a letter.'

b. anjum-ko xat likʰnaa hai
Anjum-Dat letter-Nom write-Inf is
'Anjum has to write a letter.'

(8) a. anjum-ne gʰar jaanaa hai
Anjum-Erg home-Loc go-Inf is
'Anjum wants to go home.'

b. anjum-ko gʰar jaanaa hai
Anjum-Dat home-Loc go-Inf is
'Anjum has to go home.'

If these non–nominative subjects were a result of idiosyncratic case marking by the verb, then at least three different entries for the verb would have to be stipulated with different meanings and different case marking properties. Although T. Mohanan accounts for the dative subjects, her analysis of the ergative depends upon the presence of a perfective verb because the dialect of Hindi she examines does not permit an ergative infinitive construction.

In addition, when the ergative appears with an infinitive main verb, it can mark subjects of verbs which do not ordinarily take an ergative subject in the perfective.

(9) *anjum-ne giraa hai
Anjum-Erg fall-Perf is
'Anjum fell.'

(9) shows that the verb *girnaa* (fall) is not used with the ergative in the perfective. However, the ergative is possible when it is used in the infinitive construction, (10).

(10) anjum-ne girnaa hai
Anjum-Erg fall-Inf is
'Anjum wants to fall.'

The ergative imposes conscious choice on the subject, rather than its originating from the lexical entry of the verb, and this is interpreted as desire on the part of the subject.

2.1 Desire and Obligation

This section demonstrates several differences between the dative and the ergative infinitive constructions which are reflexes of their differing semantics. All of the patterns are identical for both transitive and intransitive verbs, but we will only give examples of transitive verbs in order to save space.

2.1.1 Unwillingness

The ergative is associated with conscious choice. As such, it is predicted that when this conscious choice is removed by such phrases as *but she does not want to*, then the ergative infinitives will be ungrammatical due to a clash between whether the subject is acting under its own volition or not. However, this contrast is not expected with the dative infinitives since the obligation is imposed on the subject by some external factor, regardless of her own desires.

(11) anjum-ko$_i$ is xat-ko likʰnaa hai magar voo$_i$
Anjum-Dat this letter-Acc write-Inf is but she-Nom
is xat-ko likʰnaa nahĩĩ caahtii hai
this letter-Acc write-Inf not want is
'Anjum$_i$ has to write this letter, but she$_i$ does not want to write this letter.'

(12) anjum-ne$_i$ is xat-ko likʰnaa hai magar voo$_{*i}$
Anjum-Erg this letter-Acc write-Inf is but she-Nom
is xat-ko likʰnaa nahĩĩ caahtii hai
this letter-Acc write-Inf not want is
'Anjum$_i$ wants to write this letter, but she$_{*i}$ does not want to write this letter.'

As predicted, in (11) the pronoun *voo* is able to be coreferent with the dative subject under the reading that Anjum is being forced to write a letter against her will. However, in (12) the pronoun cannot be coreferent with the ergative subject without making the sentence ill-formed.

2.1.2 The Negative

The placement of the negative particle is more constrained in the ergative construction than the dative. The canonical placement of the negative *nahĩĩ* is preverbal. When it is inserted between the two components of the verb complex, the dative infinitive functions as an imperative. This is not the case for the ergative infinitive.

(13) a. anjum-ne xat nahĩĩ lik^{h}naa hai
Anjum-Erg letter not write-Inf is
'Anjum does not want to write a letter.'

b. anjum-ko xat nahĩĩ lik^{h}naa hai
Anjum-Dat letter not write-Inf is
'Anjum does not have to write a letter.'

(14) a. ?*anjum-ne xat lik^{h}naa nahĩĩ hai
Anjum-Erg letter write-Inf not is
'Anjum does not want to write a letter!'

b. anjum-ko xat lik^{h}naa nahĩĩ hai
Anjum-Dat letter write-Inf not is
'Anjum must not write a letter!'

The questionable grammaticality of (14a) reflects the underlying semantic differences between the two constructions in that externally imposed obligations are subject to imperatives more readily than intrinsic desires.

2.1.3 Compatibility with Inanimate Subjects

Since inanimates do not have an intrinsic desire and the ergative case imposes conscious choice on its head noun, the ergative infinitive constructions should be impossible with inanimates. However, the dative infinitive does not require its subject to have conscious choice; so, it should be able to take inanimates as subjects.

(15) a. *paanii-ne ubalnaa hai
water-Erg boil-Inf is
'The water wants to boil.'

b. paanii-ko ubalnaa hai
water-Dat boil-Inf is
'The water has to boil.'

(15a) demonstrates that an inanimate subject is indeed incompatible with the ergative infinitive, while the dative in (15b) is grammatical.

3 Analysis

In order to give an account of how the dative and ergative markers are assigned in Urdu, and particularly in the infinitive constructions, some machinery must be introduced and some ideas about how semantic case might work must be examined. For the sake of exposition, the analysis is discussed within the framework of LFG (Bresnan (1982), Zaenen et al. (1985)). However, the thrust of the analysis, that semantic information is necessary for case marking, is independent of the details of the exposition. Zaenen et al., in their analysis of Icelandic case, differentiate between grammatical, idiosyncratic and semantic case. Grammatical or structural case is determined on the basis of syntactic information only (e.g., all subjects receive nominative case), while idiosyncratic or quirky case must be stipulated by each verb in its lexical entry. The notion of semantic case is discussed only briefly, and is only intended to apply to obliques and adjuncts. In this paper, following T. Mohanan (1990), we wish to extend the idea of semantic case to non-oblique, direct, arguments.

Below, we discuss how thematic roles are not sufficiently well differentiated to capture the necessary semantic generalizations. Without the availability of more elaborate semantic information, analyses are forced to stipulate case marking on individual lexical entries despite the predictability of semantic information. In addition, certain case marking rules refer to both syntactic and semantic information, while others depend on only one or the other, as is more traditionally assumed.

The next section will attempt to implement T. Mohanan's (1990) analysis for the Hindi case system within the LFG system and to demonstrate how the ergative and dative subjects she discusses would be treated. After this has been established, the ergative and dative infinitive constructions will be examined.

3.1 Urdu Case Assignment

T. Mohanan (1990) established a set of rules which determine the case of Hindi noun phrases. Many of these rules involve the interaction of semantic structure with grammatical function structure. This account can be transferred into an LFG framework if certain assumptions are made about the structure of semantic information available to the lexicon and the type of semantic information visible directly to the syntax.

Before discussing the assignment of case in Urdu, a few simple phrase structure rules are necessary. The annotations on the rules allow for the mapping between c(onstituent)-structure and f(unctional)-structure.

(16) a. $S \longrightarrow$ NP* ($\uparrow$GF) = $\downarrow$ $\overline{V}$ $\uparrow=\downarrow$

b. $NP \longrightarrow$ N $\uparrow=\downarrow$ (CL) $\uparrow = \downarrow$

c. $\overline{V} \longrightarrow$ (V) $\uparrow=\downarrow$ V $\uparrow=\downarrow$

(16a) generates a string of noun phrases with any grammatical function, followed by a verb. (16b) generates noun phrases which are optionally followed by a case clitic; nominative noun phrases, being unmarked, are not followed by case clitics. (16c) generates either a simple or complex predicate.

The case clitics are annotated with information which acts like other phrase structure annotations. This information must not conflict with case assigned by rule or by annotations on individual lexical items. The constraint equations are only satisfied if the noun phrase is assigned case.

(17) a. *ko* ($\uparrow$CASE) $=_c$ DAT

b. *ne* ($\uparrow$CASE) $=_c$ ERG
($\uparrow_\sigma$ CC) = +

(17a) states that its noun phrase must be assigned dative case. The first annotation of (17b) states that its noun phrase must be assigned ergative case. The second annotation indicates that the corresponding semantic structure, indicated by the sigma subscript, will be positively specified for conscious choice (CC), (Dalrymple (1990)). If the argument is independently specified for non-conscious choice, these two specifications will conflict and the ergative cannot occur. Although the ergative only occurs on grammatical subjects, it is unnecessary to specify this on the clitic itself since the ergative case assignment rules only refer to grammatical subjects.

3.1.1 Semantic Case: the Dative

If generalizations about the predictability of semantic case are to be employed, as opposed to merely stipulating the appropriate case on each predicate, predicates must have an elaborated semantic structure, as has been proposed by Jackendoff (1990), not merely a listing of theta-roles corresponding to argument positions. In order to account for the distribution of dative case on

subjects in Malayalam, K.P. Mohanan (1982) proposed that any verb with a dative subject must have the annotation ($\uparrow$SUBJ CASE) = DAT in its lexical entry. This technique is necessary for truly idiosyncratic case, as in Icelandic. However, specifying this information in the lexical entry of each predicate often misses crucial generalizations, creates unneccessary lexical entries, and denies the predicability of the distribution of case in Urdu and in other languages, like Malayalam (K.P. Mohanan and T. Mohanan (1990)).

Recent representations of thematic role information are not fine grained enough to allow these generalizations to be made (Belletti and Rizzi (1988); Alsina and Mchombo (1988)). This problem has been acknowledged in attempts to reduce the amount of idiosyncracy in case assignment (K.P. Mohanan (1982:540)). For example, the dative case in Hindi/Urdu occurs on all arguments which correspond to concrete or abstract goals in the semantic structure of the predicate. However, theta-role assignment denotes these arguments as either goals or experiencers, and in Hindi/Urdu only certain experiencers receive the dative case, as the following examples illustrate.

(18) a. anjum-ne caand dekʰaa
Anjum-Erg moon-Nom saw-Perf
'Anjum saw the moon.'

b. anjum-ko caand dikʰaa
Anjum-Dat moon-Nom appear-Perf
'Anjum saw the moon/the moon appeared to Anjum.'

(19) a. anjum-ne voo kahaanii yaad kii
Anjum-Erg that-Nom story-Nom memory-Nom do-Perf
'Anjum remembered that story.'

b. anjum-ko voo kahaanii yaad ayii
Anjum-Dat that-Nom story-Nom memory-Nom come-Perf
'Anjum remembered that story/the memory of the story came to Anjum.'

The theta-roles in the (a) and (b) examples are usually viewed as being the same: Anjum is the experiencer in all four sentences. However, there is an essential semantic difference between the (a) sentences, whose subjects are marked with the ergative, and the (b) examples, whose subjects are in the dative. In the (b) examples, the subject is also an abstract goal to which the vision of the moon or the memory comes, while this is not so in the (a) examples (see T. Mohanan (1990:187–196) for further discussion of the semantics of these constructions). So, not all experiencers are marked with the dative, which means that traditional theta-marking cannot accurately predict which

arguments of the verb will appear with the dative case. Instead, semantic structure must be invoked.

Semantic case can refer to theta-roles if they are to be defined correctly, allowing rules of the type (ARG(GOAL)) $\longrightarrow$ CASE = DAT which states that all arguments of the verb which have a goal theta-role are assigned dative case. However, in order to do this, a more elaborate semantic structure is necessary for defining the theta-roles. It is this more detailed structure which must exist in order to capture the relevant generalizations. This is a position taken by Jackendoff, who argues for the existence of an elaborated semantic structure in which "thematic roles appear as positions in a detailed conceptual representation" (Jackendoff (1990:82)).

A very simplified version of the necessary semantic structure of (18b) and (19b) is shown in (20). (20) is relevant for both abstract and concrete goal/recipients in that in both cases an entity Y (e.g., memory or a book), moves to an entity X (Anjum).

(20) [Y MOVE TO X]

The essential portion of the structure above is [TO X], where X corresponds to an argument of the predicate and may have other specifications associated with it. It is this structure which requires the assignment of dative case.

The elaboration of semantic information allows case assignment rules to operate on the semantic structure, providing information that will be relevant for the f-structure. The existence of such rules prevents the redundancy of stipulating predictable case on arguments in the lexicon. One such rule for Urdu is shown below. (21) assigns dative case to the argument of the predicate corresponding to X when X is found in the configuration [TO X] in the semantic structure of the predicate. This semantic information is not found in the f-structure, but the resulting annotation must be satisfied in order for a sentence to be well formed.

(21) [TO X] $\longleftrightarrow$ (ARG(X) CASE) = DAT

Note that this rule does not make any reference to grammatical function. The grammatical function will be provided by the mapping rules between the lexicon and f-structure (Bresnan and Kanerva (1989)). (21) will apply in the lexicon and appropriately case mark the argument. This annotation cannot be overridden by later case assignment rules and must be satisfied in the f-structure, in a manner similar to the way idiosyncratic case is assigned.

3.1.2 The Ergative

Not all case in Urdu is determined solely by the semantics. Traditionally in LFG, case which is dependent on grammatical function has been assigned by

annotations on phrase structure rules (Neidle (1988)). In Urdu it is impossible to assign case directly to phrase structure nodes since there is no one-to-one correspondence between case and grammatical function. Instead, certain morphemes are specified with case assignment rules. These must be satisfied in the f-structure because they make reference to grammatical function.

The syntactic nature of the ergative, which only occurs on grammatical subjects, means that it cannot be assigned using only semantic information because syntactic information is not readily available at the level of semantic structure. The perfective morpheme is annotated with the following rule which acts as a well-formedness constraint on the f-structure.

(22) PERF: $((\uparrow \text{SUBJ})_\sigma \text{ CC}) = + \longleftrightarrow (\uparrow\text{SUBJ CASE}) = \text{ERG}$

(22) assigns ergative case to the subject of a perfective verb whenever the semantic element corresponding to that subject demonstrates conscious choice.

At first glance, (22) may appear to be redundant since the ergative clitic itself assigns conscious choice to the noun phrase. However, the multiple specification of conscious choice is needed to explain co-occurence facts in complex predicates (Butt (1989)). Verbs will be specified as having conscious choice arguments, being incompatible with conscious choice, or being unspecified for this attribute. The use of the ergative will then either unify with, clash with, or fill out the existing semantic structure. In addition, the assignment of conscious choice by the ergative clitic is essential for the ergative infinitive construction.

One question that arises in connection with semantic case is what type of semantic information should be visible to rules which apply in the f-structure. Generally, the justification for accessing such information in syntax has been rather circular: if the information is needed to make syntactic generalizations, then it is visible to the syntax. The details of how the semantic information needed by syntactic processes should be accessed have not been worked out satisfactorily as yet. Note, however, that the modular structure of LFG allows some semantic information to be available only in the detailed semantic structure which affects the lexicon, while other information is available to the f-structure as well.

3.2 Infinitive Constructions

The dative and ergative infinitive constructions are repeated in (23). They are composed of an infinitive with a tensed auxiliary, and the case on the subject varies with the meaning. The infinitive and the auxiliary compose a single item with a single predicate value in the f-structure.

(23) a. anjum-ne xat likʰnaa hai
Anjum-Erg letter-Nom write-Inf is
'Anjum wants to write a letter.'

b. anjum-ko xat likʰnaa hai
Anjum-Dat letter-Nom write-Inf is
'Anjum has to write a letter.'

The infinitive as a verb is used exclusively in modal constructions, permissive and purposive clauses, and in the constructions discussed here. The modal meaning of the two infinitive constructions in (23) suggests that they are modals, albeit with deficient morphology. The strong connection between the occurrence of infinitives and modality makes this assumption not unreasonable, and the use of bare infinitives to express modality is found in other languages, e.g., Russian (Schein (1982)).

Given that our analysis of dative case depends solely on semantic information, it would be expected that the dative subjects in infinitive constructions are a result of the same semantics, i.e., that of [TO X] as signifying a goal, however abstract. If obligation is imposed on the subject argument, the subject argument can be represented as a goal in the manner suggested by the semantic structure in (24). In constructions like (23b) it is the abstract notion of *obligation* that is represented by Y in (24).

(24) [Y MOVE TO X]

The exact mechanics of how this would work in semantic structure must be explored. The representations given in this paper are only intended as rough guidelines to what is needed. Ultimately, what is necessary are structures of the sort Jackendoff (1990) proposes, where a few spatial primitives span several abstract semantic fields and are elaborated with notions of affectedness and conscious choice.

The ergative construction in (23a), on the other hand, does not involve the notion of an abstract goal. The *desire* in (23a) emanates from the agent and is not imposed by an outside force. The ergative infinitive, then, must result from the optional assignment of ergative case to the subject of an infinitive. This is accomplished by (25) which is an annotation associated with the infinitival morpheme.

(25) INF: ((↑ SUBJ CASE) = ERG)

The parentheses in (25) indicate that the rule is optional and need not apply every time the infinitive morpheme is used. If the option in (25) is chosen, then the ergative clitic will appear on the subject noun phrase. This noun phrase will be necessarily interpreted as demonstrating conscious choice since the clitic requires this. It was noted previously that even verbs which do not allow conscious choice subjects can have subjects marked with the ergative within the context of this infinitive construction (section 2). This overlay of conscious choice by the clitic is interpreted as desire on the part of the subject for the event to occur. (25) differs from the perfective rule in (23) in that it is not triggered by semantic information. In the Hindi dialect examined by T. Mohanan (1990) the rule in (25) does not exist; thus, the ergative infinitive construction is not allowed.

In conclusion, even though the ergative and dative infinitive constructions are very similar in form, the process of marking their respective subjects with case differs. This difference is consistent with the analysis provided for other dative and ergative constructions. The dative case is always assigned to abstract goals/recipients and makes no recourse to syntactic information while the ergative case makes reference to grammatical function information.

4 Conclusion

This paper has shown how the case marking system in Urdu, which is based on both semantic and syntactic information, would work within a framework like LFG. A subset of the case assignment rules proposed by T. Mohanan (1990) for Hindi were examined. The ideas associated with these case assignment rules were used to examine a previously unnoted ergative infinitive and a similar, but better known, dative construction.

The two infinitive constructions, despite being almost identical in form and morphology, employ differing strategies to assign the correct case. The dative infinitive is consistent with the other dative constructions found in both Hindi and Urdu in that it is determined purely by the semantic notion of goal/recipient. Case assignment rules which have direct access to semantic structure information and which apply before grammatical functions are determined (i.e., before the processes mapping the lexical item into the f-structure take place) had to be formulated to account for the dative case. However, once this is done, a single rule accounts for every dative argument in the language. The ergative infinitive could not be unified with the previously known ergative constructions in the same way. Although it is true that the ergative case always denotes a subject demonstrating conscious choice, the appearance of the ergative case is also dependent on other factors. As a result, two rules were postulated for the assignment of ergative case: one associated with the perfective morpheme and the other with the infinitival morpheme.

Thus, the ergative and the dative case exemplify two kinds of case assignment processes which apply in Urdu. This paper has shown how these two differing processes might be implemented and how they would interact.

End Notes

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Lise Dobrin
Lynn Nichols
Rosa M. Rodríguez

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The General Session

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