# Online surveys as discourse context: Response practices and recipient design

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# Abstract

While a growing body of work has focused on the interactional organization of **telephone** survey interviews, little if any research in conversation and discourse analysis has examined written **online** surveys as a form of talk-in-interaction. While survey researchers routinely examine such responses using content analysis or thematic analysis methods, this shifts the focus away from the precise language and turn constructional practices used by respondents. By contrast, in this study we examine open-ended text responses to online survey questions using a conversation analytic and discourse analytic approach. Focusing on the precise turn constructional practices used by survey respondents—specifically, how they formulate multi-unit responses and make use of turn-initial discourse markers—we demonstrate how online survey respondents treat open-ended survey questions much as they would any similar sequence of interaction in face-to-face or telephone survey talk, making online surveys a tenable source of data for further conversation analytic inquiry.

# 1. Introduction

While survey researchers acknowledge differences between web and phone surveys (Keeter, 2015; Marlar, 2018), new tools like Mechanical Turk, TurkPrime, Prolific Academic, and CrowdFlower have made it increasingly simple to recruit online samples.[1] Even the largest purveyors of national surveys in the US are moving from traditional telephone surveys to those conducted online (e.g., Kennedy & Deane, 2019), often without a full understanding of the effects of this transition (Olson et al., 2019).

There has also been a concerted effort on the part of user-centered design[2] professionals to use "conversational design" in their interaction designs, including survey designs. Moroney and Cameron (2016), for example, advise survey designers to consider the user's "mental model" or mental representation/frames of interaction when designing surveys and items. Industry literature, too, is making a push towards conversational design in interaction design. While these design and industry professionals do not necessarily use or consider linguistic or conversation analytic theories regarding the organization of discourse when designing surveys, there is an underlying concept of turn taking, pragmatic competence, and frames (cf. Hall, 2019). Survey designers take this perspective to create more engagement and increase completion rates, adopting the perspective that, because people interact with computers as social actors, it follows that both designers and survey-takers are orienting to surveys as a form of social engagement and interaction.

While some survey methodologists understand surveys as analogous to conversations (e.g., Smyth, Dillman, & Christian, 2009), this understanding has not widely informed current survey analysis methods. We argue that conducting such research well requires a better understanding of the communicative and technological affordances (Hutchby, 2001) of online surveys. While researchers from a range of discourse analytic approaches have largely overlooked online surveys as a source of

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[1] For these tools, see Bohannon, 2016; Buhrmeister, Kwang, & Gosling, 2011; Litman, Robinson, & Abberbock, 2017; Palan & Schitter, 2018; and Peer, Brandimarte, Samat, & Acquisti, 2017.

[2] This umbrella term includes the fields known as HCI (human-computer interaction) in academic circles and UX (user experience) and content strategy in industry ones.

data, telephone surveys (e.g., Maynard et al., 2002) and written questionnaires (Bartesaghi, 2009) have both been treated as discourse contexts that can be fruitfully examined using such methods.

Discourse and conversation analytic research on *telephone* surveys (e.g. Maynard et al., 2002; Maynard & Schaeffer, 2012) focuses heavily on the underspecification of interview scripts and the ways that interviewers embody those scripts. Computer-based surveys, on the other hand, are overspecified, with one "participant's" turns almost entirely predetermined (see also Bartesaghi, 2009 and Forbes, 2015 on self-administered written questionnaires). That is, online survey designers take advantage of features of common software such as Qualtrics or SurveyMonkey that control both the order and the number of questions that will be presented to the respondent. Tools like skip logic change the flow of the questions displayed—or even end the survey—depending on answers to previous questions. The survey designer decides how the respondent will move through the items of the survey.

However, it is well-established in the Human-Computer Interaction (HCI) literature that computers and software exist as social actors (c.f. Nass, Steuer, & Tauber, 1994; Reeves & Nass, 1996; Nass, Moon & Carney, 1999; Nass, Isbister & Lee, 1999; Morkes, Kernal & Nass, 2000; Nass & Moon, 2000; *inter alia*) and that people will interact, consciously or subconsciously, with computers using frames for interaction that have traditionally been reserved for human-human interactions. In the analysis and discussion that follows, we work to bring this understanding of online survey users as interactants to discourse analytic research.

We are particularly interested in open-ended text responses to survey questions. Survey researchers have typically treated these responses using content analysis methods (see, e.g., Chi, 1997) that shift the focus away from the language used in responses. These methods typically approach language as a conduit that maps transparently to some sort of underlying thought (Schober & Conrad, 2002; cf. Reddy, 1979) rather than as social action in its own right. Analysts of language and social interaction have long argued that this approach to data in content and thematic analysis leads to a sort of tunnel vision that not only results in missed analytic opportunities, but also carries the risk of producing misleading analyses (Wilkinson, 2006; see also Carey & Smith, 1994; Potter & Shaw, 2018). And as many researchers begin to favor automated text analysis, they often make changes to the text to simplify processing (e.g. Boumans & Trilling, 2016), which removes micro-level linguistic choices almost entirely from the analysis. For example, many automated methods ignore so-called "stop words," including discourse markers, privileging referential meaning over other types of meaning—such as epistemic modality—that allow us to understand *how* to interpret that referential meaning.

We argue in this paper that (1) excluding non-referential meaning from analysis unnecessarily reduces survey data in ways that transform these data into something truly *contrived* (Speer, 2002), and (2) examining raw written survey data can shed light on the ways that survey users treat these surveys as a form of interactional engagement. In particular, we echo Speer's (ibid.) argument that the distinction between "natural" or "contrived" data lies not in the type of data or how it is collected, but rather in what the researcher actually **does** with such data. We take as our starting point the idea that analysts can and should approach raw online survey data much as they would approach any other form of survey or interview data conducted across other media. In the sections that follow, we contextualize the place of online survey data among other forms of data that have been the foci of conversation and discourse analysis, discuss the sequential organization of interaction in written online surveys, and examine two turn-construction practices in our online survey data that highlight how respondents treat

open-ended survey questions in much the same way that they routinely treat other forms of social interaction: as a series of sequences in which meaning is jointly produced by all parties to the interaction.

## 1.1 Surveys, Online Talk, and the Push for "Naturalistic" Data

Discourse analysts working from a "socially-oriented" perspective (Bucholtz & Hall, 2008) often operate from a variety of disciplinary backgrounds, defining the object of inquiry itself ("discourse") in multifarious ways and bringing a range of analytic methods to bear on it. But common among many such approaches is a focus on data that the researchers consider naturalistic. This concern is at both the theoretical and methodological heart of conversation analysis, and by extension it may be shared by other approaches that draw on the analytic methods of CA as a methodological toolkit.[3] Since the early inception of the field in the lectures and writings of Harvey Sacks (1992), a defining feature of conversation analytic research has been its focus on data drawn from "spontaneous, naturally occurring social interaction rather than, for instance, contrived interactions or those that might occur in a laboratory" (Stivers & Sidnell, 2012: 2). While there has been no definitive statement on how either "spontaneity" or "naturalness" might be defined or measured by the analyst (though see Speer, 2002), research that focuses on arguably **non**-naturalistic forms of interaction (e.g., Kendrick, 2017; Stokoe, 2013) has been slow to emerge. One reason for this hesitancy lies in the argument that a sufficient understanding of the interaction order (Goffman, 1983) that underlies everyday talk-in-interaction must first be achieved before venturing into data from experimental settings, simulated interactions, computer-mediated interactions, and other forms of talk that analysts have positioned as being, in some way, non-naturalistic (see especially Schegloff, 1991, 2006). This historically critical eye toward the contrived nature of certain forms of data has also been relevant to conversation analytic research on surveys, the methodological domain to which the current analysis turns. For example, in their initial work examining telephone survey interviews, Lavin & Maynard (2001:453-454) discuss the meaning of the "constructed nature" of interview data, noting that critics of survey interviews frame them as "inherently distort[ing] in-formation" in ways that demand alternative methods for conducting interviews. Yet in approaching survey interviews as a site for the collaborative production of talk between interviewer and respondent, Lavin and Maynard carve out space for examining these survey interviews as a site (though perhaps not a primordial one; see Schegloff, 1992) for human sociality, examining how both parties to the survey use interactional resources in ways that reflect their institutional roles and the institutional agenda demanded by the survey. In many ways, the continued work of Lavin, Maynard, and colleagues on telephone survey interviews[4] is thus a precursor to the current study on online surveys, though the present study differs notably in its focus on written interaction rather than talk facilitated by telephone.

While conversation analytic research has a long history of examining conversational and institutional interaction on the telephone, work that treats written communication as a site for interaction has been less forthcoming. One notable exception to this trend has been an expanding body

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[3] In linguistic anthropology, for example; see e.g. Moerman, 1988; Duranti 1997, 2011.

[4] See e.g., Lavin & Maynard, 2001, 2002; Maynard, Freese, & Schaeffer 2011, 2013; Maynard & Hollander, 2014; and the papers collected in Maynard et al., 2002.

of literature examining text-based forms of online talk. In their systematic review of this research area, Paulus et al. (2016) describe four analytic aims that appear throughout this body of work. Three of these aims are focused on the organization of talk in synchronous discourse environments designed for participants to be simultaneously present online (as with multi-party chat rooms or one-to-one instant messaging); here analysts examine conversational coherence and sequential organization, explore the management of interactional trouble, and draw comparisons between face-to-face and synchronous online talk. A fourth aim of this work has been to explore the accomplishment of social action in asynchronous environments that are instead designed for interactions in which participants are not expected to be simultaneously online (as with e-mail or online forums). Given the asynchronous design of online surveys, it is this body of work that most closely aligns with the goal of the present analysis.

In light of the significant differences between how speakers organize and manage their talk in face-to-face and asynchronous online settings, prior work on asynchronous online talk has often worked to justify how analysts can fruitfully apply CA to this particular medium (Paulus et al., ibid.) For example, such work has noted how turns at talk are formulated and designed using news receipts and change of state tokens, script formulations, extreme case formulations, and other features of turn design that have also been examined in work on face-to-face interaction. Similarly, while the present study differs from prior conversation analytic work on asynchronous online talk insofar as we purposefully position our analysis as an examination of online surveys *qua* surveys rather than as a specific instantiation of online talk, we share an analytic concern with showing how conversation analytic methods might be applied to asynchronous forms of talk. In an overview of conversation analytic work on online talk, Meredith (2019) argues that such computer-mediated forms of interaction may in fact serve as an exemplar for naturalistic data, as the former may be captured post-facto without researcher intervention, and its representation is also "considerably less mediated, more 'natural' than recorded and transcribed conversations" (Reed & Ashmore, 2000: 17). While we do not approach the institutional survey data examined here as such an "exemplar" of the interaction order, we also take up the position that written forms of online interaction may be approached similarly to the types of face-to-face and telephone interactions that have been a traditional focus of CA research.

# 2. Activity Structure

Before turning to individual question-answer sequences, it is helpful to consider the overall structure of online surveys. We base this discussion chiefly on our experience as both creators and users of surveys, with reference to the literature on phone surveys where appropriate. Most online surveys have a four-part structure:

1. **The invitation**: Before the survey itself begins, respondents must agree to participate. Typically, the invitation to participate in an online survey takes place on a different platform or medium than the survey itself. The invitation may take place through email, a pop-up on a website, an ad on social media, a QR code or URL provided at an event, a task listing on a panel provider site, and so on. In contrast, an invitation to a telephone survey can progress smoothly into the survey without a change of platform. The invitation typically contains information about who is

conducting the survey, the purpose of the survey, incentives for taking the survey, and the approximate time commitment.[5]

2.  **The introduction**: The first page of many online surveys contains additional detail about the survey itself, such as expected duration and any incentives offered. Such a page sometimes includes contact information for a researcher or a department and, if applicable, an IRB or similar oversight organization. If the survey has formal informed consent information, this is typically where it is provided. The amount of information in the introduction varies by field/genre.

3.  **Content modules**: These items represent the survey itself; this is the only phase typically analyzed by survey researchers. Like telephone surveys, online surveys may be of variable length. In some cases they may include complicated skip logic, random assignment to particular modules, and other forms of variation from one respondent to the next.[6]

4.  **The closing**: After content modules are complete, most online surveys contain some form of closing. In its simplest form, this may be an acknowledgment that the survey is complete: *Thank you for your responses*. In some cases, this activity may also contain a request for contact information for follow-up requests or to pay out incentives, or information about how to access results in the future.

This entire activity may be experienced simultaneously as asynchronous and synchronous communication. Linguistic anthropologists have increasingly come to *animation* rather than *performance* (Silvio 2010; Gershon, 2015) as a way of retheorizing mediated communication, and this distinction is useful for describing how survey users approach the online survey as an interaction with varied interlocutors. Silvio (2010, p.427) defines animation as "the projection of qualities perceived as human—life, power, agency, will, personality, and so on—outside of the self, and into the sensory environment, through acts of creation, perception, and interaction." Doing so allows for two types of displacement. First, there need not be a one-to-one mapping between creators and characters. Second, animation allows for a dual temporality: in this case, the survey respondent may understand the interaction as **both** a synchronous interaction with a computer **and** an asynchronous interaction with the researcher or team of researchers who developed the questions.

The understanding of the interaction as both synchronous and asynchronous has been borne out by research in HCI that has investigated how users interact with computers more broadly. Many of the experiments in this literature involve some kind of language interaction component. Their results suggest that people, regardless of whether they are aware of it or not, activate frames of interaction and scripts that exist in human-human communication when interacting with software or a computer (Nass,

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[5] For telephone surveys, see Conrad et al., 2013; Maynard & Schaeffer, 1997; Schaeffer et al., 2013; etc.

[6] See Schaeffer & Presser (2003) for more information on question design, as well as Heritage (2002), Houtkoop-Steenstra (2002), Lavin & Maynard (2002), Moore & Maynard (2002),  and Viterna & Maynard (2002) for CA-based analysis of this phase of the survey. Interestingly, the tradition that argues for analyzing individual responses in isolation from one another also has a considerable literature on question order and "context effects" (see, e.g., Smyth et al., 2009). Common recommendations include asking sensitive questions later in the survey and asking demographic questions at the end, which are largely motivated by concerns about priming and stereotype threat (John Voiklis, personal communication).

Steuer, & Tauber, 1994; Reeves & Nass, 1996; Nass & Moon, 2000; Nass, Isbister, & Lee, 2000). In fact, Morkes, Kernal, and Nass (2000, p. 94) state, "The basic argument here is that individuals frame interactions with computers as interactions with imagined programmers; since programmers are people, it is not surprising that individuals display social responses." This idea can thus be extended to the survey designer. Not only do people exhibit behavior that suggests they treat computers broadly as social actors, but they may also be aware of the designer behind the survey as a potential interaction partner and craft their responses as if the designer were asking them the questions directly, parallel to a phone survey. Again, we are able to consider this both a synchronous interaction with the computer and an asynchronous interaction with the researcher or designer who created the survey.

## 2.1 Question Structure

Whether administered by phone, paper, or online, survey questions can be divided into two structural types: closed-ended (or fixed-choice) and open-ended. As Schaeffer & Maynard (2002, p.264) note, "Questions may be designed and formatted to obtain a 'yes' or 'no' answer, a specific number or piece of information, one of a set of response categories, or a relatively free-form description; the first three types of questions can be considered 'closed' questions."

On the phone, interviewers and respondents jointly construct answers to *closed questions* that fit within those constraints (cf. Moore & Maynard, 2002, Schaeffer & Maynard, 2002). In online surveys, on the other hand, the constraints that reinforce the closed nature of such yes/no questions are mechanical: respondents must typically select from a series of radio buttons or move a slider. "Accountable" responses[7] to *open-ended questions*, on the other hand, are subject to fewer constraints, whether formal or mechanical. Van der Zouwen (2002, p.48) points out that "The answer to an open question can be judged to be (in)complete, (not) informative, or (im)precise." At first glance, the overdetermination of online survey scripts leaves no room for survey designers or respondents to repair, clarify, or verify these responses. Yet Lynch (2002, p.133) notes that there is "a rough functional equivalence between the oral-electronic administration of an interview and the literate self-administration of a questionnaire," and with this observation in mind, we point to conversation and discourse analytic findings on interviews and focus groups (e.g., Puchta & Potter, 2004; Roulston, 2006; Wooffitt & Widdicombe, 2006) that show how different facets of these institutional interactions, from turn-type allocation to the production of meaning, are in fact collaborative accomplishments rather than *a priori* structures in a standardized or standardizable instrument. We take these points to their natural conclusion, arguing that we should study self-administered online surveys using the same methods that we would use for telephone or face-to-face interviews with an interactionally co-present interviewer. In doing so, we find that survey users' responses show a demonstrable orientation to the survey as an interaction, not unlike those in other discourse environments.

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[7] "In standardized interviewing, an accountable answer is one that interactants can treat as reasonable, objective, verifiable, or properly achieved" (Schaeffer & Maynard, 2002, p. 264).

# 3. Sources of Data

The analysis that follows is based primarily on two publicly available data sets, both of which come from survey research conducted by the second author. Both surveys were conducted in the U.S. in American English. We present the survey data as transcripts throughout the analysis below and have not edited respondents' orthographic choices, even where a response does not follow standardized conventions (e.g., typos or spelling errors). We note that the line breaks presented in these transcripts have been added by the authors to simplify the presentation of the data and are not present in the original survey data; line numbers have been added accordingly to facilitate a close analysis of the data. The news story sharing dataset (Knology, 2020b) includes 448 sets of responses from 6 different surveys. In each survey, respondents were asked to read or watch a news story and answer a series of questions about their reactions. Respondents were asked to rate their willingness to share the story in three different ways:

- I am likely to email this story to someone.
- I am likely to share this story on social media.
- I am likely to describe this story to someone.

Those who provided an above-neutral answer to this third item saw an additional page with three open-ended items:

- You said you were at least somewhat likely to describe this story. Who are you likely to describe it to?
- How would you describe it?
- Why would you describe it?

The news story relevance dataset (Knology, 2020a) includes 1143 sets of responses from 7 different surveys. In each survey, respondents were asked to read or watch a news story and answer a series of questions about their reactions. Towards the end of the survey, respondents were asked the following two questions:

- Did you find this story relevant to you?
- Why or why not?

In the first survey, this was asked as a single prompt with an open text box. In all following surveys, the first question offered radio buttons "Yes" and "No" while the second question provided an open textbox.

Both surveys were hosted on Qualtrics. Following the growing consensus about device-agnostic design, respondents see a small number of questions at once and then move forward through the survey. Backwards navigation is not possible because of skip logic (described above). In this way, the temporality of the survey thus bears some resemblance to a spoken conversation, in that respondents are unable to access previous responses. We also note that there are some limits on length of response: the platform mechanically limits text responses to 20,000 characters, though the size of the text box may further limit respondents if they do not realize that the box scrolls.

## 4. Interaction & Sequence

In examining the online survey as interaction, we understand each question-answer pairing as constituting a basic *sequence* (Schegloff, 2007) of interaction in which the survey taker is normatively positioned as a respondent, much as in face-to-face and telephone surveys as well as other forms of institutional interaction where this is a routine form of turn-type allocation (e.g., research interviews and focus groups, broadcast news interviews, political interviews, police-suspect interrogations; see also Heritage & Clayman, 2010). We see multiple consecutive question-answer sequences unfold in Example 1, in which the survey (S) provides question-word interrogatives while the survey respondent (R) formulates their responsive turns in the space provided on the survey. Each question and its relevant response form a basic sequence called an *adjacency pair*, consisting of two consecutive units of talk produced by separate speakers and organized so that the second turn is understood as attending to the action-relevant contingencies of the first turn. The talk at lines 1-5, lines 6-9, and lines 10-11 in Example 1 thus each constitute their own respective adjacency pairs.

Example 1[8]
```
[This respondent read a story about New Year's Resolutions.]
01 S: You said you were at least somewhat likely
02    to describe this story. Who are you likely to
03    describe it to?
04 R: My girlfriend, she usually does the NY
05    resolution thing so I think she'd like it
06 S: How would you describe it?
07 R: Well I'd just say it was a handful of tips
08    that might help better than having a
09    strict goal to reach.
10 S: Why would you describe it?
11 R: I think I would do that because it might help
12    her think about her self-improvement in a
13    different way.
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The second and third question-answer sequences (lines 7-9 and 11-13) each contain responses formulated as single units of talk that provide answers to the prior question. However, the response in tat lines 4-5 is expanded past an initial type-conforming response (Raymond, 2003) to include multiple units of talk: an initial phrasal response to the prior question ("my girlfriend") followed by a subsequent unit of talk that offers an account for the participant's response ("she usually does the NY resolution thing so I think she'd like it"). We focus on such multi-unit responses throughout the rest of this section.

Respondents' use of multi-unit responses in the online survey setting is particularly interesting, as such responses resist the mechanical constraints of the survey while simultaneously orienting to the survey as allowing for the types of multi-unit turns that speakers routinely and normatively deploy in

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[8] As previously mentioned, survey respondents see only a small number of survey questions at once as they proceed through the survey. The three prompts seen here in Excerpt 1 were all simultaneously visible to respondents.

conversation and institutional talk. Here we find one piece of evidence that online survey respondents treat survey questions as analogous to other forms of interaction. That is, while the survey question prompt has only asked for the respondent to answer a particular question—which we might presume creates a sequential environment solely for the single adjacency pair structure of the question-answer sequence—respondents show demonstrable orientation to the survey as additionally allowing for this basic sequence to be expanded to accommodate other interactionally relevant forms of action.

As seen in Example 1, the news sharing dataset that we analyze asks multiple consecutive questions about how respondents would share a story they have recently read with others: these questions ask **who** they would describe it to, **how** they would describe it, and **why** they would describe it. We see multi-unit responses occurring exclusively in response to the initial question about **who** participants would share this story with,[9] and an analysis of these multi-unit responses shows that participants employ them to do different types of interactional work. First, and as previously seen in Example 1, survey respondents often used multi-unit responses to provide accounts for their answers to the prior question.

Example 1
[This respondent read a story about New Year's Resolutions.]
```
01 S: You said you were at least somewhat likely
02    to describe this story. Who are you likely to
03    describe it to?
04 R: My girlfriend, she usually does the NY
05    resolution thing so I think she'd like it
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At lines 4 the respondent provides a phrasal response consisting of the membership category "girlfriend." Notably, this category does not offer a clear semantic relationship to the topic of the story under discussion, New Year's Resolutions (i.e., nothing about belonging to the category "girlfriend" that makes this individual a more or less likely candidate to have this story shared with them). The multi-unit expansion of this response thus allows survey respondents to provide an account that offers further context for their response. We see similar uses of multi-unit responses to offer accounts in Examples 2-4 below, as each respective respondent offers up membership categories like "father," "friend," and "sister" that are subsequently justified through multi-unit turn expansions.

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[9] As seen here in Excerpt 1, respondents may expand their response to the first question of this series (lines 1-3) to formulate accounts that may be made redundant by the subsequent question about **why** the user would share the story (line 10). While online surveys do not always allow respondents to return to a prior question, the questions we examine here appeared on a single 'page' that did offer this possibility. It may well be that respondents who leave these multi-unit expansions in their answers (i.e., they do not return to the prior question to retroactively edit out the account) may be further treating their responses as analogous to a face-to-face or telephone survey where such editing would be impossible. In other cases it may well be that Instead of making sense of each question one after the other as the survey proceeds, users can design their answers to this specific sequence of questions, and future studies making use of keylogging or screen-capture data (Beißwenger, 2008; Meredith & Potter 2014) to see in which order respondents answer survey questions and how such responses may be edited could prove fruitful in investigating this issue further.

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Example 2
[This respondent read a story about New Year's Resolutions.]
01 S: You said you were at least somewhat likely
02    to describe this story. Who are you likely to
03    describe it to?
04 R: My father, he's been complaining about health
05    issues lately and essentially does the complete
06    opposite of what the article recommends.


Example 3
[This respondent read a story about pregnancy and alcohol.]
01 S: You said you were at least somewhat likely
02    to describe this story. Who are you likely to
03    describe it to?
04 R: Share with my friend, she is pregnant now


Example 4
[This respondent read a story about pregnancy and alcohol.]
01 S: You said you were at least somewhat likely
02    to describe this story. Who are you likely to
03    describe it to?
04 R: My sister, who was very worried about having had
05    a night of drinking before she found out she was
06    pregnant. (her daughter is 5 now and fine)
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Example 4 further shows how these types of multi-turn expansions can do relational work as well, as the respondent orients to the possibly delicate situation entailed in having admitted that their sister drank while pregnant with her child, expanding their response at line 6 through a parenthetical that assures the reader that the child is currently in good health.

In addition to allowing further sequential space to account for one's answer to a prior question, multi-unit responses may also be used to conduct the types of stance work that are routinely seen in other forms of talk-in-interaction. For example, in Examples 5 and 6 below, each respondent offers an initial, non-type conforming unit of talk that fails to adequately answer the question ("I don't know") before offering an answer hedged by either the modal adverb "maybe" or the adverbial "I guess," all turn construction practices that position the respondent as being less knowledgeable (Kamio, 1997; Heritage, 2012) about their subsequent response.

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Example 5
[This respondent read a story about viruses.]
01 S: You said you were at least somewhat likely
02    to describe this story. Who are you likely to
03    describe it to?
04 R: I'm not sure...maybe someone sick that asks about it.
```

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Example 6
[This respondent read a story about asbestos.]
01 S: You said you were at least somewhat likely
02    to describe this story. Who are you likely to
03    describe it to?
04 R: I'm not sure--anyone that is left-leaning I'd guess
05    as Republicans don't generally want to hear about it
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The specific organization of multi-unit turns seen in these two examples—a non-answer followed by a hedged, non-type conforming response to the initial question—likely show an orientation to both the general preference for answers over non-answers in maintaining progressivity in talk (Stivers & Robinson, 2006) as well as the institutional expectations of the survey format for respondents to provide answers to the questions provided. Such turn formulation practices are thus a resource for respondents to register a less knowledgeable epistemic stance toward the question asked while still aligning with the preference offering an aligning response to the survey's questions.

Finally, multi-unit responses may be used to not only respond to the directly prior question, but can also be used to tie back to a prior question. For example, Example 7 begins at line 1 with an initial yes/no interrogative about whether the respondent found the story relevant. As seen at line 2, the user has selected from one of two available multiple choice responses to this question, responding "YES." This sequence serves as a preliminary to the next question at line 3, a wh-question that invites the respondent to account for their answer from line 2.

```
Example 7
[This respondent watched a story about antibiotic-resistant bacteria.]
01 S: Did you find this story relevant to you?
02 R: ☑   YES      ☐   NO
03 S: Why or why not?
04 R: Well, clearly, because I am ultimately as
05    reliant on antibiotics as everyone else, so
06    it's definitely relevant to me.
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We will turn to the respondent's use of a turn-initial *well* at line 4 in the following section, and will instead begin our analysis by noting that the respondent initially formulates a unit of talk composed solely of the intensifier *clearly*. Notably, this use of *clearly* here is not grammatically fit to the prior wh-question, and can instead be understood as tying back to this sequence's initial yes-no interrogative at line 1. Here, it enables the respondent to retroactively upgrade their initial response from line 2—a multiple choice response that constrained the respondent's choice of answer to a binary selection—to effectively modify their prior "YES" to "YES, clearly."[10] A similar moment of retroactive stance work occurs again at line 5 as the respondent formulates yet another unit of talk featuring a modified, full-clausal repeat of their multiple choice response from line 2. This unit of talk is also upgraded through

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[10] The respondent's use of punctuation to separate out the adverb "clearly" from the rest of their response may also do stancetaking work; see also prior work on punctuation as stance marker, e.g., Androutsopoulos & Florian (in print), McCulloch, 2019; Raclaw, 2006) in synchronous forms of online talk.

another intensifier, *definitely* ("it's definitely relevant to me"). Through this multi-unit formulation, the survey respondent is thus able to resist another mechanical constraint of the survey, the multiple choice response format, which disallows the respondent to articulate the type of emphatic agreement or disagreement that routinely occurs in other discourse environments.

As each of the examples in this section show, in expanding their responses beyond the sequential space that online surveys provide for respondents to answer each question, survey respondents show an orientation to their response as requiring more interactional work than would be possible in a simple question-answer sequence. In resisting the mechanical constraints of the online survey, respondents thus show an orientation to these surveys as allowing for the same types of turn construction practices that are normatively produced in virtually every other interactional environment. Similarly, these practices show respondents' orientation to their own interactional needs—such as offering accounts for their responses or conducting epistemic stance work—as taking precedence over the mechanical constraints imposed by the survey itself.

## 4.1 Discourse markers

In the previous section, we examined how respondents' use of multi-unit responses showed orientations to the online survey as calling for the same forms of interactional practice that participants routinely draw on in other discourse settings. In particular, we noted how the use of turn construction practices like multi-unit responses allowed respondents to move beyond the mechanical constraints of the online survey to instead respond as they might in a face-to-face or telephone survey. In this section we examine how the use of another turn construction practice, turn-initial discourse markers, demonstrates similar orientations to the interactional nature of the online survey.

While discourse markers are not highly frequent in the datasets we analyze here, we do see the use of *well*, *so*, *I mean*, and other such markers across respondent answers to survey questions. Virtually all of the discourse markers found throughout the dataset occur unit-initially (i.e., at the beginning of a sentence or other grammatical unit), and while such words and phrases are not syntactically integrated with the rest of the talk that follows (Heritage, 2013) they nonetheless conduct significant interactional work. The most frequent token in the dataset is unit-initial *well*: In the news relevance data set, we find eight cases of *well*-prefaced responses to wh-questions. In line with prior research on *well*-prefaced responses to wh-questions in English conversation (Heritage, 2015; Schegloff & Lerner, 2009), these prefaces served two primary functions in our data. First, *well*-prefaces might show an orientation to some problematic or inapposite quality of the prior question. Second, *well*-prefaces might indicate a "nonstraightforwardness" (Schegloff & Lerner, 2009) in how the user responds to the prior question, thus working to guide the recipient's understanding of how the response is fit to the question.

Returning to Example 7, we see that the respondent's answer to the wh-question at line 3 is initially prefaced by the discourse marker *well*. As previously noted, the respondent's use of a multi-unit response with multiple intensifiers allows them to claim that the story is not just relevant to them, but is both *clearly* and *definitely* relevant to them, and this stance work is important for understanding the function of the turn-initial *well* that precedes the response proper at line 4.

```
Example 7
[This respondent watched a story about antibiotic-resistant bacteria.]
01 S: Did you find this story relevant to you?
02 R: ☑   YES      ☐   NO
03 S: Why or why not?
04 R: Well, clearly, because I am ultimately as
05    reliant on antibiotics as everyone else, so
06    it's definitely relevant to me.
```

Both Schegloff and Lerner (2009) and Heritage (2015) show how *well*-prefaced responses to wh-questions are used to generally indicate some "nonstraightforwardness" in responding, and they may additionally be used to display a stance that the prior question was problematic or inapposite. This is what the *well*-preface does in Excerpt 7 as well, as it marks the inapposite nature of the question given that the user treats the story as something that is evidently (in their words, *clearly* and *definitely*) relevant to them, thus treating their response as something that should go without saying. We see this same use of a *well*-prefaced response to mark the inappositeness of the prior question in Examples 8 and 9 below.

```
Example 8
[This respondent watched a story about dental health.]
01 S: Did you find this story relevant to you?
02 R: ☑   YES      ☐   NO
03 S: Why or why not?
04 R: Well I do have teeth and have had a cavity or
05    two in the past. So sure the story is relevant
06    to just about anyone.
```

```
Example 9
[This respondent watched a story about Lyme disease.]
01 S: Did you find this story relevant to you?
02 R: ☑   YES      ☐   NO
03 S: Why or why not?
04 R: Well like most people I have had a tick bite
05    and knowing more about them is always useful
06    information.
```

In Example 8, the respondent has answered YES (line 2) to the initial multiple choice question asking about the relevance of the story they have just watched about dental health. As in Example 7, the respondent's *well*-prefaced response to the subsequent wh-question (lines 4-6) orients to the question as inapposite by treating this answer as a given. Here this is accomplished by making a rhetorical appeal to the universality of the topic at hand, as the respondent notes that they "have teeth" (implying that the story would be relevant to anyone with teeth) and further notes the the story would be relevant to "just about anyone" (presumably, anyone with teeth). In a similar way, the respondent in Example 9, who has watched a story about Lyme disease, formulates a *well*-prefaced response that goes on to note

that "most people" have had a tick bite and thus, such a story would be of obvious relevance to that portion of the population, marking this survey question as inapposite as well.

The *well*-prefaced response formulations in Examples 7-9 each offer evidence that the respondents orients to the survey as a form of interaction by demonstrating the relevance of not simply answering the survey questions in the space provided, but to additionally offer up a stance toward the problematic nature of the survey questions themselves. Other uses of *well*-prefaced responses in the survey data also demonstrate respondents' orientations to the interactional nature of the online survey as well. As previously noted, *well*-prefaced responses to wh-questions can also be used to project a "nonstraightforwardness" in responding, and we see this in Examples 10 and 11 below.

```
Example 10
[This respondent watched a story about influenza.]
01 S: Did you find this story relevant to you?
02 R: ☑   YES      ☐   NO
03 S: Why or why not?
04 R: **Well** I never get the flu and have never had a
05    flu shot, but I am rethinking that now just because
06    of what she said about it reducing symptoms even if
07    you end up getting the flu


Example 11
[This respondent watched a story about the opioid crisis.]
01 S: Did you find this story relevant to you?
02 R: ☐   YES      ☑   NO
03 S: Why or why not?
04 R: well i do know some people that have been drug
05    users but they are now clean and took the some
06    time but is does not relate to my life.
```

In Example 11, the respondent has answered YES (line 2) to the initial multiple choice question asking about the relevance of the story they have watched about the flu. While the subsequent wh-question would normatively invite some justification involving the relevance of the topic to the respondent, the response at line 4 instead begins with the respondent acknowledging that they "never get the flu," which might point to the story being, in fact, not relevant to them. As seen at lines 5-7, however, the respondent goes on to provide an account showing that, despite having never had the flu or receiving a flu shot, the story was in fact relevant to them. Somewhat similarly, in Example 11, the respondent has answered NO (line 2) to the initial multiple choice question asking about the relevance of the story they have watched about the opioid crisis. As projected by the *well*-preface at line 4, this response does not proceed in a straightforward manner, as the respondent announces that they do in fact know people who have been drug users (implying that the story would, in fact, be relevant to the respondent) before noting that these individuals are no longer users, making the story irrelevant to the respondent. Through their use of the types of *well*-prefaced responses seen in Examples 10 and 11, respondents orient to the fact that speakers' turns at talk are routinely "constructed or designed in ways which display an orientation and sensitivity to the particular other(s) who are the co-participants" (Sacks, Schegloff, &

Jefferson, 1974: 727), what conversation analysts term *recipient design*. Much as with face-to-face and telephone surveys, then, see the recipients here orienting to the fact that their responses to the survey questions are specifically being designed for an interactional interlocutor. Though we so often see survey analysts exclude discourse markers from their analysis, the various uses of *well*-prefaced responses in this section serves as yet another example of how respondents orient to online survey questions as potentially dynamic and mutable--much as they might in any other form of interaction--as respondents use these practices to mark survey questions as problematic or troublesome to answer.

# 5. Conclusions & Implications

The results of this analysis are in line with HCI research showing that computers function as social actors and that people generally activate human-human interaction strategies when engaging with technology. The respondents in these data sets engaged with the survey items much as they would if they were in conversation with another person, following established patterns of responding to talk in face-to-face and telephone interaction. Specifically, we examine how respondents make use of both multi-unit response formulations turn-initial discourse markers in ways that orient to the survey as an accountable form of interaction guided by the same principles of recipient design that shape other forms of face-to-face and telephone surveys and interviews. Classic conversation and discourse analytic studies of interviews (e.g., Potter & Wetherell, 1995) show how these forms of institutional talk are in fact an accomplishment that unfolds turn-by-turn through as each participant jointly talks the sequential and interactional context into being (Heritage, 1984). Similarly, we show how online survey respondents demonstrate their own agency as participants to the interaction as they use multi-unit turns to expand their responses beyond the sequential space otherwise allowed by the survey instrument, while they also demonstrate a sensitivity the principles of recipient design through the use of discourse markers that tailor their responses for an interactional interlocutor rather than a faceless, digitally-mediated survey.

While our findings thus show some of the ways that survey respondents treat open-ended survey questions much as they would any similar first turn from a human interlocutor, we also acknowledge that the type of recipient-designed communication we document in online surveys nonetheless differs in significant ways from the types of joint meaning making that conversation analysts have regularly documented in other forms of interaction. For example, while the responses of survey users display their understanding of a preceding question, the online survey format does not allow for a basic "third turn" expansion (Schegloff, 2007) where the survey analyst might then demonstrate their own understanding of the user's response. Similarly, the types of "why or why not questions" seen in Examples 10 and 11 explicitly do not take up the previous answer as they potentially might in a synchronous survey or interview setting; what would be a reflection of recipient design in the latter case is simply a matter of pre-designed sequence organization in the online survey environment.

Conversational interfaces, including online surveys, are written and created to purposefully elicit a more "natural" reaction or response from the user. The intent is to create familiarity, but at the same time, frames of social interaction are also activated, regardless of whether the user is aware of this or not. For example, Nass and Moon (2000) found that their participants' responses to gendered voices

or racialized images in computer programs reflected the same prejudicial ideologies that are activated in face-to-face contexts, providing evidence that people treat human-computer interaction in similar ways to human-human interaction. Nass, Isbister, and Lee (2000) showed that people will follow the same social rules and expectations when interacting with a chatbot as they would with a human interlocutor. While a majority of HCI researchers are not specifically taking a CA lens to their research, this framing of the computer as a social actor provides robust support to our argument that online survey data can be a rich source of interactional data. Our analyses of raw online survey data likewise show that conversation and discourse analytic methods may be fruitfully applied to such data to give a fuller understanding of participant responses.

While survey respondents demonstrably approach the survey as a form of interaction with an unknown interlocutor, survey analysts have traditionally approached it as a collection of discrete answers to discrete questions. This disconnect parallels those we see commonly across a range of social contexts, where the act of perception always socially positions the perceived and perceiver alike. Writing about the "auditory emergence" of the schoolgirl in 20th-century Japan, Inoue (2003, p. 157) reminds us that "...perception (whether auditory or visual) is never a natural or unmediated phenomenon but is always already a social practice." Indeed, the emergence of the schoolgirl category produces a male "listening subject." Similarly, Flores and Rosa (2015; Rosa & Flores, 2017) expand on this work to outline how racialized speaking subjects are created by racially hegemonic perceiving subjects, which may be either individuals or institutions. Such findings from the linguistic anthropological literature echo work in conversation and discourse analysis that show how surveys, interviews, and focus groups are moments of collaborative interaction rather than an objective or neutral resource for mining qualitative data (Potter & Wetherell, 1995; Speer, 2002). In a similar vein, we argue that survey respondents have perfectly understood the task; it is the party we might call the "analyzing subject" who fails to consider the linguistic and interactional richness of textual survey data.

This work provides a way forward for those analyzing subjects. We suggest two ways that analysts—even those without expertise in the conversation and discourse analytic methods we employ in the present study—might change their practice. First, we encourage survey analysts to **understand meaning as a joint effort between survey designer and respondent** and **look for signs of interactional trouble**. Even a shift as simple as counting the number of more-than-minimal responses, and particularly examining the types of work that might be accomplished through multi-unit responses, would be valuable. Doing so might also encourage analysts to add additional open-ended items to capture the kinds of information that participants volunteer through turn-constructional practices that resist the mechanical constraints of the survey. Second, analysts should **avoid reviewing open-ended items in isolation and recognize the interactional agency of survey respondents**. This paper's second author makes a general practice of analyzing groups of related open-ended items (see, e.g., Example 1) together, rather than treating each question as discrete. Doing so allows her to identify patterns that may be less clear from looking at single items in isolation. And in fact, these two methodological changes support a key goal of social science research: shifting the unit of analysis from the *response* to the *respondent*.

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