

Good reasons for bad testing performance: The interactional substrate of educational exams¹

Boas razões para um desempenho ruim em testes: o substrato interacional dos exames educacionais

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ABSTRACT - This paper was originally published in 1992. It arose out of a project to study how clinicians tell parents a diagnosis of a developmental disability. That specific project was part of a larger one conducted in 1985-1986 to study the delivery of bad and good news in both ordinary and medical settings (Maynard, 2003). As part of the developmental disabilities study, we also examined how testing was done as a precedent to deciding on diagnosis (Marlaire and Maynard, 1989), and the paper here about the “interactional substrate” was meant to show the orderliness of testing interactions – the basic structures that made it possible to generate valid and reliable examination scores that could lend to the official assessment. More recently (2013-2015), a research team and I returned to the same clinic with a grant from the U.S. National Science Foundation, to study more intensively the testing and diagnosis of Autism Spectrum Disorders (ASD). In the time between the 1985 study and the recent one, the prevalence of ASD had skyrocketed in the U.S. from 1 in 5000 children to the current rate of 1 in 68. A study of the micro-interactions surrounding testing and diagnosis does not explain the increase in prevalence but it does say just how testing is done and how clinicians use results and other information to diagnose children. With regard to testing, in particular, we have come back to the paper on the interactional substrate again and again because probing this substrate and the practices by which it is constituted remains as an avenue in to understanding ASD as not just a condition of the child but as something that is manifested as a feature of social interaction. There are ways in which ASD as a child’s condition is co-produced by way of (i) the orderliness of interactions between clinicians and children, and (ii) how tests constrain both the clinician and the child in terms of what is visible as “competence.” Thus, in current work, we distinguish between what we call first-order, or *concrete* competence, which, by way of the interactional substrate, allows testing to be done, regardless of what the official results may be, and second-order displays of *abstract* competence (Maynard and

RESUMO - Este artigo foi originalmente publicado em 1992. Ele surgiu de um projeto para estudar como os médicos apresentam aos pais um diagnóstico de deficiência no desenvolvimento infantil. Tal projeto específico fazia parte de outro mais amplo, conduzido entre 1985-1986, para estudar a comunicação de boas ou más notícias tanto em cenários cotidianos quanto em cenários de tratamento de saúde (Maynard, 2003). No estudo das deficiências de desenvolvimento, também examinamos o modo como eram realizados os testes que precediam a decisão sobre o diagnóstico (Marlaire e Maynard, 1989), sendo que o artigo aqui apresentado, sobre o “substrato interacional”, visava a mostrar o caráter ordenado das interações durante os testes – as estruturas básicas que possibilitavam gerar escores de exames válidos e confiáveis que pudessem levar à avaliação oficial. Mais recentemente (2013-2015), retornei à mesma clínica com um grupo de pesquisa, com financiamento da Fundação Nacional de Pesquisa dos EUA (*U.S. National Science Foundation*), para estudar mais intensivamente a testagem e o diagnóstico dos Transtornos do Espectro Autista, TEA, (*Autism Spectrum Disorders*, ASD). Entre o estudo de 1985 e o mais recentemente realizado, a prevalência de TEA nos EUA disparou de 1 em 5000 crianças para a taxa atual de 1 em 68. Um estudo das microinterações envolvidas nos testes e diagnósticos não explica o aumento na prevalência, mas revela, sim, como os testes são realizados e como os médicos usam os seus resultados e outras informações para diagnosticar as crianças. Em relação à testagem, em particular, retomamos inúmeras vezes o artigo de 1992 sobre o substrato interacional, pois o exame desse substrato e das práticas que o constituem continua sendo um caminho para que se compreendam os TEA não só como condição da criança, mas também como algo que se manifesta como traço da interação social. Há, pois, maneiras de se coproduzir os Transtornos do Espectro Autista como uma condição da criança, as quais se prendem a: (i) o caráter ordenado das interações entre médicos e crianças, e (ii) o modo como os testes cerceiam tanto o médico como a criança em termos do que é visível como “competência”. Assim, no trabalho atual, distinguimos entre, primeiro, o que chamamos de competência concreta ou de primeira-

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Turowetz, 2016). Abstract competence involves the ability to produce general answers or ones that are shorn of embodied or other contextual orientations to questions or that involve what Donaldson (1978) has called “disembedded knowledge.” The emphasis of clinical tests on measuring second-order, abstract competence may obscure various kinds of first-order, concrete competence and “autistic intelligence” a child displays (Maynard, 2005). By doing so, testing can potentially make the child seem more impaired than he or she is, or at least suppress information that could improve performance and/or be informative for how to design home and schooling environments that enhance a child’s skills and integration into these social units.

Keywords: psychological testing, conversation analysis, disability.

-ordem, que permite, por meio do substrato interacional, que a testagem seja realizada, independentemente de quais possam ser os resultados oficiais; e, segundo, o que chamamos de demonstrações de competência abstrata, ou de segunda-ordem (Maynard e Turowetz, 2016). A competência abstrata envolve a habilidade de produzir respostas gerais ou que sejam despidas de orientações para a pergunta com base em elementos corporais ou contextuais de outra natureza, ou que envolvam o que Donaldson (1978) chamou de “conhecimento desencaixado” (“*disembedded knowledge*”). A ênfase dos testes clínicos em medir a competência abstrata, de segunda-ordem, pode tornar obscuros vários tipos de competência concreta, de primeira-ordem, e de “inteligência autista” que uma criança demonstre (Maynard, 2005). Realizada assim, a testagem pode, potencialmente, fazer uma criança parecer mais incapacitada do que realmente é, ou pode, no mínimo, suprimir informação que pudesse melhorar o desempenho e/ou contribuir para projetar ambientes domésticos e escolares que ampliem as habilidades da criança e a sua integração nessas unidades sociais.

Palavras-chave: teste psicológico, análise de conversa, deficiência.

Children who experience difficulties in school or at home may be referred to a diagnostic clinic and there take a battery of examinations, including some that test their educational level and learning abilities. In analyzing the administration of a variety of test instruments, we argued that the results of these examinations are collaborative productions (Marlaire and Maynard, 1990).⁴ This is contrary to the stimulus-response model of the testing relationship, which presumes that examiners are neutral conduits of pre-specified items to which examinees respond with correct or incorrect answers reflecting individual levels of ability. Videotapes and transcripts of actual exam episodes show that each part of a “testing sequence” is assembled in the socially organized interaction between examiner and examinee.

Whereas the previous analysis utilized excerpts from a variety of testing instruments,⁵ in this paper we concentrate on a single subtest, called *blending*, of the Woodcock Johnson Psychoeducational Battery, which is designed to measure both aptitude and ability in a variety of learning-related functions. The blending subtest involves the clinician breaking up words into components and speaking them to the child, whereupon the child must reconstitute the sounds as the appropriate word. According to the test manual, the purpose is to measure a child’s ability to verbalize whole words after hearing syllabic and phonemic components that the examiner presents sequentially.

The subtest by itself does not determine how clinicians will assess the child’s ability; rather, the blending score, along with those from other subtests, becomes part of a cluster that indicates “broad cognitive ability” and “reading aptitude”.

By investigating this one subtest intensively, our purpose is to deepen our understanding of the test process as a collaborative accomplishment. It seems that participants interactively assemble the individual parts of a “testing sequence” – i.e., that each question or answer *as a performance* is routinely embellished with the minutia of actions exhibiting the participants’ efforts to work together to produce the utterance. More than that, this sequence itself is an embedded detail of an organized substrate of nonvocal as well as vocal activities. We refer to the *interactional substrate* of educational testing as consisting of those skills of the clinician and child that allow them to arrive at an “accountable” test score. By “accountable” test score, we mean one that is taken as objective, verifiable, valid, properly-achieved, and so on, where that achievement depends upon an organization of concerted practical actions that constitutes the participants’ interaction. Actual testing, then, is nothing other than the interactional achievement of which it consists, and from which test scores can be extracted. While the capacity to engage in these practical actions is not itself being tested, the possibility of displaying those abilities which are subject to examination utterly depends upon them.⁶

⁴ See also Cicourel *et al.* (1974); Heap (1980); Holstein (1983); Mehan (1973, 1978); Mehan *et al.* (1986).

⁵ Included here were the Woodcock-Johnson Psychoeducational Battery, the Brigance Diagnostic Inventory of Early Development, the Ongoing Developmental Assessment Tool, and the Psychoeducational Profile. For descriptions of these, see Marlaire and Maynard (1990, p. 85). Special Education assessments rely, by legal mandate, on the use of more than one testing instrument in order to minimize test bias in the reported results. In addition, clinicians chose specific tests on the basis of what they judge to be the target “problem” and/or characteristics (such as the age, emotional or physical disability) of the subject.

⁶ See also Lynch’s (1984, p. 67) discussion of how the questions in a mental status exam work to “turn up signs” of neurological disease: “An interactional context first had to be created before any signs were available for interpretation.”

Our title is meant to suggest that the interactional substrate of educational testing may be a factor that interferes with the proper standardization and, hence, validity of testing scores. However, we do not mean to describe the testing process in an ironic manner – i.e., to somehow debunk the exams⁷ and show the ineptitude of administrators and consequent unfairness to children. If anything, our adult subjects were impressive for the amount of professional expertise they deployed in questioning and probing children. Rather, our title obviously adverts to Garfinkel’s (1967) classic study, “Good Organizational Reasons for Bad Clinic Records,” where it is demonstrated that apparently incompetent record-keeping has an organizational basis in the reflexivity of documents to the courses of action that clinicians engage in their everyday routines. In our investigations, we “came upon” a seeming vast amount of behavior that might threaten the ideal of standardized test-giving practice.⁸ However, detailed analysis reveals just the opposite of unprofessional, sloppy, or uncontrolled conduct, for the giving and receiving of test items depends upon *interactional* systematicity and already-orderly modes of collaborative behavior.

Preliminary

We videotaped three clinicians who were individually paired (according to a system of rotation) with 10 children ranging in age from 3 to 8 years. We chose to study the Woodcock-Johnson Blending Subtest for two

reasons: it is short enough to analyze intensively from beginning to end, and we have two episodes involving different clinicians and children. We have transcribed Episode 1 (with Clinician 1 and Child 1) and Episode 2 (with Clinician 2 and Child 2) in detail, using conventions adapted from the work of both Gail Jefferson and Charles Goodwin (see Appendix). In excerpts from these episodes and in the text, we refer to the children and clinicians with abbreviations (CL1 = Clinician 1, CH1 = Child 1, CL2 = Clinician 2, CH2 = Child 2).

Initially, three aspects of the interactional substrate stand out. They are exhibited in the first excerpt.⁹

First, there is *co-orientational* work on the part of clinician and child; both posture themselves in characteristic ways while engaging in the examination (see Figure 1). While we will eventually discuss this matter in some detail, we can note here that the clinician manages several tasks through what may be called displays of “administrativeness”: paying attention both to the child and to reading and scoring tasks. Co-orientation by the child involves displays of “recipency” (Heath, 1984) or shows of readiness to receive a testing item. When such displays are absent, the clinician regularly issues a co-orientational summons, such as “listen to this one” (line 4) or “listen to this word” (line 10).

A second aspect of the interactional substrate consists of *instructional sequences* that prepare the child for an upcoming series of tasks. Above, at lines 1-2, the clinician formulates what the subtest task is; at lines 2-4, assigns jobs to specific parties; and at lines 6-8, rehearses a testing

Excerpt 1

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(1) Episode 1:1
1.   CL1:  This is kind of a game, and this game (0.2) means you
2.       have to figure out what I'm saying. I'm gonna say a
3.       word. One part at a time. And you have to tell me what
4.       word I'm saying. Okay? Listen to this one.
5.   CH1:  Kay
6.   CL1:  Fing? ger.
7.   CH1:  Finger.
8.   CL1:  Goo::d. You know this game, don't you.
9.                                     (0.4)
10.  CL1:  Okay. Listen to this word. Win dow.
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⁷ There is a critical literature concerning these tests, which casts doubt on whether questions and answers do, in fact, offer an indication of subjects' generalized cognitive abilities. Critics (e.g., Adelman, 1979; Coles, 1978; Ysseldyke, 1986) maintain that these exams are unable to discriminate accurately among identified “learning problems”, primarily for reasons of construct validity. That is, it is claimed that research fails to show that the tests accurately tap the attributes they are said to measure. This concern, however, is not ours, except as what we identify as the “interactional substrate” interferes with the possibility for standardizing the administration of the test, and hence its facility for unbiased measurement.

⁸ For a discussion of the idealization of the testing and assessment process as a feature of the academic/scientific literature, see Marlaire (1992).

⁹ Until discussing nonvocal activities in more detail, we use transcripts in simplified form.

sequence. The transition from instruction to actual testing is regularly marked with some proposal about the child's understanding (line 8, "You know this game, don't you").¹⁰ In the context of neurobehavioral examination, Lynch (1984, p. 71-72) also notes the importance of "prefatory"

instructional components and notes that the transition to testing involves a "stripping away" of these components.¹¹

Finally, then, are the *testing sequences* to which we have already referred. Both rehearsal and actual testing appear to incorporate a three-part sequence:¹²

Part 1; testing prompt:	Fing? ger.	(Line 6)
Part 2; reply:	Finger.	(Line 7)
Part 3; acknowledgment:	Goo::d.	(Line 8)



Figure 1. Displays of Co-orientation.

This sequence can be either *elaborated* or *collapsed* according to the contingencies of actual interaction.

An elaborated test sequence results when a clinician initiates "repair" or correction¹³ with respect to the child's answer (Excerpt 2).

The basic sequence here consists of the prompt (line 1), the correct answer (line 5), and the acknowledgment (line 6). However, the correct answer is arrived at by way of the child first offering a reply (line 2) whose cadence closely mimics the prompt. Thus, at line 4, the clinician asks for a speeding up of the reply, which she models through very swiftly speaking the latter part of the request, "say it fast." McHoul (1990, p. 365, 372) suggests

¹⁰ While the clinician's comment, "You know this game, don't you," might propose that the child is familiar with the subtest (indeed, there were several instances in the larger corpus of videotaped examinations where children displayed prior knowledge of a specific subtest), clinicians use the "game" metaphor consistently enough across the corpus to suggest more general functions. First, they use the metaphor to engage the child in an activity (such as testing) that otherwise might not be inviting. Second, clinicians thereby indicate that the test idiom has certain game-like qualities. In the blending subtest, for instance, the clinician presents it as a puzzle ("... you have to figure out what I'm saying"). It may be, then, that the consequentiality of the activities is thereby obscured.

¹¹ One of the effects of stripping away prefatory components during actual testing, Lynch (1984) argues, is to "trivialize," or press into the background, the interactional accomplishment upon which successful adherence to the structure of testing sequences depends. In our terms, "testing" as an observable-reportable activity is truncated from its reflexivity to the interactional substrate, including the instruction and coaching which precede the use of testing sequences proper. It is by way of such truncation that it is possible to analyze correct and incorrect answering as the child's success or failure at the skill being measured.

¹² In characterizing testing sequences as three-part units, we are following a literature in which a variety of researchers (McHoul, 1978, 1990; Shuy and Griffin, 1978; Sinclair and Coulthard, 1975) identify and describe what Mehan (1979, p. 52-53) calls an "instructional sequence":

1. Initiation. Teacher: (Holding up card) This is the long word.
Who knows what it says?
2. Reply. Student: Cafeteria.
3. Evaluation. Teacher: Cafeteria, Audrey. good for you!

In these terms, "testing sequences" are similar to the instructional sequence, except that the third turn is officially to be neutral rather than evaluative. However, we wish to note that there is debate over whether the minimal units of interaction, including instructional sequences, are two or three parts. Schegloff and Sacks (1973) argue that the base unit of sequence construction is an adjacency pair. This adjacency pair can be expanded through the use of pre-sequences (see, e.g., the discussion in Maynard, 1984, p. 86-7), or through insertion sequences such as those occupied with repair (Schegloff *et al.*, 1977). If instructional or testing sequences followed the two-part format (question and answer), then the evaluative component is an add-on of some kind. In contrast, Jefferson and Schenkein (1977) have proposed that a three-turn sequence (such as appeal, acceptance/rejection, and acknowledgment) may be a base conversational unit or "action sequence," which also can be "expanded," and the third turn is an integral part of that unit. (Participants' orientation to its use for controlling the interactional "so what" of the prior two parts may engender considerable jockeying to be in position to produce the third turn.) We cannot here settle whether instructional and testing sequences are two or three parts. Our strategy, in following the literature on classroom interactions and referring to a three-part testing sequence, is heuristic. Our analysis is meant to be consistent with the *phenomena* of interaction (such as pacing, as discussed below), however they are ultimately parsed in and as the achievements of organized practices such as sequence parts. While, in the body of our text, we discuss the three-part testing sequence, at relevant points we footnote how these phenomena are to be understood in relation to a hypothetical two-part sequence.

¹³ On repair and repair sequences, see Schegloff *et al.* (1977). For a lengthy and technical studies on the operation of repair in classroom lessons, see Mazeland (1986), and McHoul (1990).

Excerpt 2

(2) E2:18
 1. CL1: Can dee
 2. CH1: Can dee
 3. (0.1)
 4. CL1: Can you sayitfast?
 5. CH1: CANdee
 6. CL1: Good.

Excerpt 3

(3) E2:9
 1. CL2: I want you to tell me what the word is. I'm gonna say
 2. f:in:: ger: What word did I say.
 3. (0.4)
 4. CH2: Finger?
 5. CL2: Okay. Good. You've got these. Win: dow.
 6. CH2: (0.2) Window?
 7. CL2: Good. (1.0) Muh: ther:
 8. CH2: Mother?
 9. CL2: (1.4) Ta: bl:..
 10. CH2: Table?
 11. CL2: (1.0) .hhh Can: dee
 12. CH2: Candy?
 13. CL2: (1.2) Rho: dah:..
 14. CH2: Road.
 15. CL2: (1.4) Soh: puh:..
 16. CH2: Soap.

that repair initiations of this sort deal with “procedural” rather than substantive or informational aspects of answering, although it is clearly the case here that the procedural issue relates to the substance of the answer. That is, the child’s answer may be regarded as incorrect if the “parts” are there but not spoken in the correct modality. In any case, repairs like this exhibit how instructions provided at the outset of the subtest are inherently incomplete. That is, it may be impossible to anticipate all the ways in which the child might have to be cued to provide appropriate answers when the test is actually in progress; accordingly, clinicians introduce instructive activities according to contingencies that are local to the *in vivo* performance of particular test items.¹⁴ Resulting largely from clinicians’

initiations of repair and correction, then, elaborated testing sequences show further aspects of the interactional substrate. It is through such sequences that, when children do not at first provide what a question intends, clinicians, in various ways, can seek a better, more appropriate, and ultimately correct answer.

A collapsed test sequence is visible in the clinician’s elimination of the third-turn acknowledgement. When a clinician first elides the third turn, this may launch a chained series of collapsed sequences.¹⁵ This happens with our second clinician-child pair (see lines 7 through 16) (Excerpt 3).

The clinician’s last use of an acknowledgment (Excerpt 3, line 7) occurs after the child correctly

¹⁴ See Drew’s (1981) illuminating discussion of the instructive features of adults’ corrections of children’s mistakes in ordinary conversation. On how the organization of repair relates to giving instruction in classroom talk, see McHoul (1990).

¹⁵ If the testing sequence is only two parts – question and reply – then the chained series would be simply a number of contiguous and complete sequences rather than a collection of “collapsed” units.

provides the answer “window” (line 6). Subsequent to “mother” (line 8) and for the next 10 items, the clinician provides only a prompt. Thus, it seems that rather than using an acknowledgment to indicate the completion of a sequence, the clinician does so by pausing and then producing a new prompt. There is a simultaneity here (the closing of one sequence and the opening of another) that is similar to what Schegloff (1986, p. 130-131) describes as the “interlocking” of sequences. It is only when the child gives an incorrect answer that this chaining or interlocking stops, and the clinician once again uses an acknowledgment.

Further aspects of the interactional substrate

So far, we have described the interactional substrate in terms of sequences – co-orientational, instructional, and test. It seems obvious that it is through such sequences that participants engage in much of the work of actual examination. However, these sequences only scratch the surface of the interactional substrate. We wish to deepen our analysis in two ways. First, we will consider another expanded test sequence and, among other things, show that it is important to situate that sequence within the local history of the coordinated activity comprising the test-so-far. Second, and at greater length, we will examine nonvocal, embodied activity of the exam’s participants.

Local history of testing sequences

The episode we wish to examine occurs just after Excerpt 2 above. In this next episode, the child is ultimately scored as answering incorrectly. We will consider how the interactional substrate may contribute to such an outcome (Excerpt 4).

Several things are of note here. For one, after CH1’s first try at an answer (line 3), the CL1 initiates

repair with regard to that answer (line 4), but also modifies her own prompt by softening her pronunciation of the last sound (“duh;” the degree sign indicates of this softening), which may exhibit her awareness that the source of the incorrect answer may be her original prompt whose sound bursts are distinct and forceful. Thus, it is not only the child who may have to do some *in situ* learning (as we noted above). In the course of giving an exam, the clinician may modify her own behavior in relation to responses of the child, acquiring expertise as she goes.

More to our concern is the possibility that the child’s first answer reflects her just-acquired sense of speed. Having been successful at the speeding-up strategy on the previous word (“candy”), CH1 appears to employ the same strategy here, saying “rohduh” (line 3) very quickly. Her focus on the speed of pronunciation may deflect attention from something crucial that differentiates this word from the previous ones, its syllabic structure. Moreover, if CH1 is preoccupied with the rapidity issue, CL1 reinforces this. After the repair initiation (at line 4), CH1 looks away from the clinician and slows down her pronunciation of the word by lingering on the initial sound (line 6), whereupon CL1 requests repair (line 8) in a way that again signals the need for a faster tempo. This time, CH1’s answer (line 9) is much like her first try (line 3); CL1 subsequently produces an acknowledgment (line 10) and scores the reply as incorrect.

The syllabic difference between the prompting word here and earlier ones is important. The subtest, we noted, starts with the rehearsal item “finger.” Next, in order, are “window,” “mother,” “table,” “candy,” and then the prompt for “road.” Thus, while all of the previous items are two syllables, this is just one. The significance of this is that, as Sacks (1967, lecture 12, p. 8-9) has argued, the “position of an item on a list is relevant to hearing what

Excerpt 4

- (4) E1:23
1. CL1: Roh::duh.
 2. (1.2)
 3. CH1: Rohduh.
 4. CL1: Inkay. Roh::°duh
 5. (3.8)
 6. CH1: Roh::
 7. (0.2)
 8. CL1: Can you say it fast?
 9. CH1: Rohduh
 10. CL1: Oka::y.

that item is”.¹⁶ Hence, in at least two ways – i.e., with regard to the signaled concern for speed and the indicated syllabic structure of words, the local history of preceding talk and action provide a context for the child to mishear and even err in this particular segment. Just as in the courtroom Pollner (1979, p. 235) studied, “... the developing session may act as its own socialization agent... every transaction in the ongoing activity may become fraught with instructional possibilities”. Here, to the extent that the child is learning what this exam is from within the interactive practices of which it consists, she arguably has been socialized to produce a wrong answer. It is not the clinician’s incompetence or the child’s inabilities that allow this, however, but rather the structures of interaction.

A final matter of note here is, in the acknowledgment turn, a significant change from what has gone before. Previously, when the child provided correct answers, the clinician produced the term “good”. Here, when the child seems to err, the clinician uses “okay” (line 10). This is a subtle shift but can occur regularly in accordance with whether the child is right or wrong, despite the fact that clinicians are not to provide evaluative feedback to children (Marlaire and Maynard, 1990, p. 96).¹⁷ Thus, it is not only that any given testing sequence *has* a history, it may also be *historicized* in certain ways. In a manner similar to how astronomers discover a pulsar (Garfinkel *et al.*, 1981), clinicians must extract from the “foliage” of their and their subjects’ embodied interactional practices, (a) an object that can be heard as an assessable answer and as achievedly produced according to proper methodic procedure, and (b) an assessment (correct or incorrect) that would stand as any competent clinician’s determination in the circumstances of the answer’s production. Thus, we have noted that when the clinician responds to the child’s candidate answers, she may modify her own behavior,

and thereby show an awareness that an improperly-given prompt may have misled the child. We have also shown how the design of the exam itself, which the clinician incorporates as a particular sequential pattern in the giving of testing prompts, may provide the occasion for a subject’s mishearing. Nevertheless, clinicians’ initiations of repair and correction work to obtain further utterances from the child that are the official exhibits for professional inspection.¹⁸ Thus, no matter what the cues to the child from the foliage of embodied practices that comprise the exam’s historicity, an extracted incorrect answer ultimately devolves to the child’s inability as its source (Drew, 1981, p. 259-260; Marlaire, 1990).¹⁹ As Lynch has remarked about neurobehavioral examinations, “Failures during the collaborative activity of testing were transformed into failure *of* the patient’s performance of the test”.²⁰

Nonvocal and Embodied Behavior: The Clinician

So far, we have concentrated on vocal aspects of these testing encounters, but the interaction is considerably more complex in the ways that clinician and child comport themselves bodily and do so collaboratively. We will demonstrate how the two participants finely tune their embodied behaviors in a concerted way, by discussing the separate tasks to which the parties attend, and then analyzing how their complementary management of these tasks is part of an overall activity structure of which, as we indicated earlier, the three-part testing sequence is only a part.

The clinician has to manage at least four jobs, and does so through co-orientational practices that we have glossed as displays of “administrativeness.” She must read the test items, give them to the child, listen to the child’s

¹⁶ Thus, there can be a sequential basis for the sort of thing Grimshaw (1980) identifies as “partial” understandings and “mishearings.” As one example, Sacks (1967, p. 8) provides the following:

A: I went out a lot then. One weekend I went to hear Pete Seeger, the next weekend I went to hear Joan Baez, and the next weekend I went to hear Wayne Morse.

B: Who’s Wayne Morse.

A: Wayne Morse. The Senator.

B: Oh. Wayne Morse.

B, displaying recognition of Wayne Morse in the last utterance, evidently “knew” who he was all along. However, hearing the first two persons (Seeger and Baez) in the list to be singers, B may have been listening for another singer, and therefore did not originally identify the politician.

¹⁷ Note that during the “rehearsal” in Excerpt 6 below, which involves CL2 and CH2, the clinician (at line 6) produces “okay” and “good” in tandem (followed by “you’ve got these”). Evaluations, then, sometimes involve more than just one component.

¹⁸ Lynch (1984, p. 78) notes that the use of repair during a mental status exam is also a method for “objectifying” the patient’s response and providing a clinician with an opportunity to closely scrutinize it.

¹⁹ This works both ways, of course. That is, an extracted “correct” answer is seen to reflect the child’s ability, no matter what the contribution of the clinician in coaching it from the child. On how a correct answer can be coached, see Marlaire and Maynard (1990, p. 88). For a treatment of the way that teachers can “clue” children into producing a correct answer during classroom lessons, see McHoul (1990, p. 355-362).

²⁰ Lynch (1984) was discussing how, in administering “mental status exams,” clinicians came to see patients’ expressions of hostility, unresponsiveness, or disinterest as symptoms of clinical syndromes, whereas we are pointing to the manner in which a variety of accommodative behaviors of both clinician and child, contingently produced according to the exigencies of asking and answering exam questions, dissipate as clinicians render a judgment of correct or incorrect in regard to a child’s response. For a phenomenon similar to Lynch’s (1984), see Lloyd’s (1991) discussion of how therapists, during examinations designed to determine if sexual abuse has occurred, treat children’s lack of responsiveness to questions as evidence of that abuse.

Excerpt 5. Continuation

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15.  CL1:      ..... X-----
      (0.1) can you sayitfast?  ((CH1 tilt head on "fast"))
      -----

16.  CH1:      -----,,
      (0.2) CANdee.  ((CH1 duck head, tilt torso back, smile))
      -----

17.  CL1:      VVVVVVVVV
      Goo:::::d.  ((CL1 smile))
      -----

18.  CH1:      VVVVV
      (-- )  ((CH1 rolls head to right))

19.  CL1:      .....X---
      Roh:: duh.
      ...X---
      -----

20.  CH1:      (1.2) Rohduh.  ((CH1 smile))
      -----

```

answers, and score correct and incorrect answers. Thus, a clinician sits with the examination instrument between herself and the child, has a score sheet on the table in front of her, and holds a pencil or pen, which she uses for scoring. In patterned ways, the clinician moves her head and gaze in such a way as to be noticeably attending to the child, the instrument, and the writing that she does on the sheet. How the testing sequence is coordinated with this non-vocal behavior is mapped in detail on the next transcript segment. Understanding the excerpt may necessitate consulting the transcription conventions for gaze behavior in the Appendix. In the segment, notice in particular the “X’s,” which mark where the clinician brings her gaze to the child (Excerpt 5).

The points at which the clinician’s gaze arrives on the child are various, but still show a clear pattern: at line 2, the point is one word before the testing prompt; at line 6, it is just before the prompt itself; at line 9, it is during the prompt but before its second component: and at line 11, it is at the initial sound of the prompt. Invariably, in both of our blending subtests, the clinician’s gaze will have reached the child at least by the end of the testing prompt.

This shows a readiness to receive the child’s answer, and once the clinician’s gaze is directed to the

child, it stays there for at least the beginning of the child’s response. Regularly, the clinician withdraws her gaze before a candidate answer is finished, whereupon she looks at the testing instrument (observe the commas, which mark withdrawal of gaze, at lines 3, 8, 10, and 12). This enables the clinician to be reading the next item from the instrument and sometimes scoring the answers while producing a third-turn acknowledgment or assessment.²¹ Thus, while one version of the third turn in a testing sequence is that it completes the sequence and aids with the transition between test items, we would suggest that the clinician’s gaze (and head movements), in anticipating or expecting that a complete answer is underway, indicate and help achieve the completion and transition process before an assessment appears. Moreover, because at least two tasks – the child answering and the clinician beginning to read the next item – are done in partial simultaneity, the glancing away of the clinician figures in the pacing of the exam.

Nonvocal and Embodied Behavior: The Child

Complementary to the clinician’s displays of administrativeness are the child’s displays of “recipi-

²¹ If instructional sequences are two parts, it may be that the addition of an acknowledgment is “holding” the connection between contiguous sequences while the clinician completes her scoring and reading in preparation for vocalizing the next test item.

Excerpt 6. Continuation.

10. CL2: WWWW
 Good
 VVVV

 11. .VVV..
 (-----)
 VVVVV

 12. -----
 Muh: ther:
 VVVVVVVVV

 13. CH2: ,, WWWW
 Mother?
 VVVVVV

 14. WW..V.X
 (-----)
 VVVVV..X

 15. CL2: -----,
 Ta: bl::
 --/--,,

 16. CH2: VV,, WW
 Table?
 VVV....

 17. WWWW.
 (-----)
 .. (--)

 18. CL2: .VV..X--
 Can: dee
 (----X--)

 19. CH2: ,, WWWW
 Candy?
 (---,,)

 20. WWW..-
 (-----)
 VVVVVV

 21. ----X----
 Rho: dah::
 VVV^VVVV

 22. CH2: ---,,
 Road.
 VVVVV

 23. WWWWWW..
 (-----)
 VVVVVV..

toward the clinician, at least by the time that a prompt is given (see Figure 1). The interactional substrate is very finely tuned with respect to co-orientation. In the above excerpt, for instance, the clinician appears very sensitive to the slightest alteration in the child's reciprocity. Thus, in Excerpt 5, during the rehearsal prompt (line 3), its answer (line 3), and the clinician's evaluation (line 4), CH1 keeps her gaze fully on CL1. As CL1 says, "You know this game don't you", however, CH1 looks down at the test booklet. Then, before going on to the initial testing prompt, CL1 issues the co-orientational summons ("Listen to THIS word," line 6) to which we earlier referred. During this summons, CH1 brings her gaze back to the clinician so that she is looking fully at CL1 before the latter produces the prompt (line 6). Furthermore, CH1 continues to keep her gaze and head fully directed toward CL1 during the subsequent three testing sequences (from lines 6 through 11). This expression of attentiveness, in fact, seems to solicit the evaluation or acknowledgment that the clinician provides (e.g., at lines 9 and 11). However, when answering the prompt for "table" (line 12), CH1 begins to withdraw her gaze, also moving her head down and to the right. Immediately, two things happen. CL1 eliminates the evaluation or acknowledgment, and she pauses (also clicking her tongue, line 13) for a shorter duration than she did with preceding prompts (compare silences at line 9, 11, and 13). It appears, then, that CL1 regards the child's movements as an attentional lapse to be remedied with a faster pace, which is achieved in part through moving more quickly to the next test item.²³

Further evidence that clinicians may deal with problems in co-orientation by eliminating the third turn of the testing sequence derives from a similar happening in Example 2.²⁴

Initially, CH2's gaze behavior here is similar to that of CH1. She brings her eyes to rest on the clinician just before the prompt is given, as during the rehearsal sequence involving "finger" (line 2), or she brings her gaze to the clinician on the second and last component of the prompt for "window," line 9). After CH2 answers each of these prompts, CL2 provides the third part of the testing sequence, an acknowledgment. Next, however, during the prompt for "mother" (line 12), CH2, rather than looking at CL2, gazes downward at the test booklet, and continues doing so even as she answers (line 13). Then, while scoring and reading, CL2 simply pauses (line 14) and then produces the next prompt at line 15 ("table").

At this distinct moment and in this precise way is the series of collapsed sequences, which we examined previously, begun. This is different from Episode 1, where, after the third-turn acknowledgment was eliminated, CH1 answered the next item incorrectly, the clinician asks her to repair the candidate answer and (when the child does so), says "good".²⁵ CH2, in similar circumstances, answers correctly and continues doing so until the prompt for "about" (later in Episode 2). In dealing with CH2's incorrect answer to "ah: bow: t:," CL2 re-introduces a third term acknowledgment, "Okay." It seems, then, that continuing to engage the collapsed form of a testing sequence depends upon the child obtaining correct answers. Also noticeable in Episode 2 is that throughout the series of collapsed testing sequences, CH2 mostly gazes away from CL2, only momentarily looking at her during the prompts for "table" (Excerpt 6, line 15), "candy" (line 18), and "soap" (not in Excerpt 6). Mostly, CH2 is gazing at the test booklet, the table, and even the floor. As compared with CH1, she appears much more listless and less solicitous of the third-turn acknowledgment.

Reciprocity and Alignment Toward the Testing Activity

Both interviews suggest that the components of reciprocity are ways of enacting an alignment toward the proposedly central activity of testing. On the one hand, clinicians respond to gross head and bodily movements with co-orientational summonses. For example, in Test 1, after the child's try at "road," CL1 next gives the prompt for "soap:".

As CH1 answers (line 3), she withdraws her gaze and then also moves her head down and to the right. At that moment, CL1 issues a co-orientational summons (line 4). Then, during the latter part of that utterance, CH1 returns her gaze to the clinician. She keeps it there, except for a brief moment during the silence at line 8, until the end of a rehearsal sequence (lines 11-14). When CH1 repeats the word "soap" (at line 14), she again withdraws her gaze. CL1 almost immediately produces a co-orientational summons (line 16), whereupon CH1 moves her head in a semicircle and ends up re-directing her head and gaze at CL1 (lines 16-17) in time to receive the prompt for "pillow" (line 18).

In both of our episodes, every time the child either moves her head or body out of the base reciprocity posi-

²³ Immediately after this, CL1 returns to using the third-turn of the testing sequence. This seems to occur because of the repair sequence that is inserted after CH1's reply (line 14 in Excerpt 5) to the prompt for "candy" (line 13). CH1 had mimicked the deliberateness with which CL1 gave that prompt. After CH1, responding to the repair initiation (line 15), "says it fast" (line 16), CL1 once more gives an evaluation (line 17).

²⁴ Note that if the instructional sequence is two parts, it is not that the third turn is being eliminated, but that an extraneous component, which can be employed to manage the transition from one testing sequence to another, or to provide evaluative feedback when a child seems solicitous of it, can be dispensed with.

²⁵ See footnote 19 and Excerpt 5, lines 13-17.

Excerpt 7. Continuation.

15.		VVVV (0.2)	
16.	CL1:	VVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVV mkay listen to this, one ((CH1 moves head in semicircle))	((CL1 smile))
17.	CH1:	////,--- hhhhhhh ////,--	((brings head to gaze at CL1))
18.	CL1:	----- Pihl low. -----	((CH1 has hands on hips))



Figure 2. Child's head and gaze averted; Clinician: “Okay, listen to this now”.

tion, such summoning activity occurs. Figure 2 shows a prototypical example of the child looking away; it is just that turn of the head to which the clinicians responds with “listen to this now.”

Thus, asking a child to “listen” is not an indiscriminate action whereby clinicians offhandedly remind children to pay attention; rather, it squarely corresponds with a child's change in alignment toward what the clinician regards as the focal activity. It seems, therefore, that such gross movements enact an unacceptable alignment that threatens the interactional substrate. Clinicians, from within the midst of that substrate, work to preserve it through explicit vocal and nonvocal summoning behavior.

On the other hand, children can distance themselves from the central activity in less extreme forms, withdrawing gaze while maintaining proper displays of bodily and head reciprocity. Rather than using an orientational request and explicitly asking for the child's return to attentiveness, clinicians may “speed up” or even “rush through” (Schegloff, 1982) the evaluation parts of test-

ing sequences and in that way manipulate components to command the child's orientation. As the child continues to answer correctly, the two parties concertedly achieve “rapid pacing” as an orderly feature of their interaction.

Discussion

The interactional substrate of educational testing underlies the accountable production of test results. While both participants contribute to and collaboratively organize the substrate, the involved skills are not themselves subject to measurement, except indirectly. The substrate consists of such practical activities as prompting with test items, answering, initiating repair and correction of prompts and answers, doing the repair and correction, acknowledging, evaluating, and engaging other vocal and nonvocal, embodied practices so as to effect the test as an official and valid enterprise.

One way of approaching the interactional substrate is through the issue of standardization. Examinations are to be administered in a uniform manner, and environmental factors are to be controlled so that the test truly measures the child's ability. Metaphorically speaking, the interactional substrate is like an environmental factor that has not been adequately investigated, much less controlled. We explore this metaphor with two main points, the *learning* that clinician and child experience during the test, and the *feedback* that clinicians may be giving their subjects.

Learning in the Midst of the Test

Even though children are given instructions and participate in a rehearsal of the subtest, Excerpt 1, in which CL1 asked CH1 to say her answer “fast” shows that instructions can never be complete. In other words, for the child, there is in-process instructing and learning,

even though she is supposed to know the “rules of the game” beforehand. This is true for the clinician as well. CL1’s self-repair on the prompt for “road” in Excerpt 2 is evidence that she may notice her own performance as a source of trouble. In short, the participants to a test are like “Agnes,” the transsexual whom Garfinkel (1967) studied and who, from within the interior of the process of passing as a “natural, normal” female, simultaneously was learning what that passing entailed as a practical accomplishment. Or, the participants are like the judges and defendants in traffic court, who “live within” the very order of courtroom affairs and features that they simultaneously manage as a practical task (Pollner, 1979). From within the interior of the exam experience, children and clinicians learn what they should do to give, receive, and answer test items properly and correctly.

An implication of participants being attuned to what the *in situ* experience can teach them is that the child can acquire presumptions about a subtest and how to perform. When a clinician says to “say it fast” on one item, the child may use that strategy like an algorithm to be applied to any next answer. If a series of items show a pattern or characteristic (such as prompting words being one or two syllables), the child may use her knowledge of that pattern to fashion subsequent responses. Our point here is not that this is uniformly dysfunctional for the child. Indeed, what is perhaps being tested is the child’s ability to adjust to the nuances of different testing prompts. However, if errors introduced in a child’s answer reflect orderly processes that are not adequately controlled or held constant in the design of the test, it may bias the results (cf. Schaeffer, 1991). Following our metaphor, the interactional substrate, as an *organization* of practical activities, may be a systematic source of such influence on testing outcomes.

Feedback

Although permitted to provide comments of a generalized nature (“you’re doing fine,” for example), clinicians’ feedback is very circumscribed because of the possibility that it might influence the child’s performance. For instance, the Woodcock-Johnson (of which the Blending exercise is a subtest) specifically admonishes the clinician, “Be careful that your pattern of comments does not indicate whether answers are correct or incorrect” (cf. Mehan *et al.*, 1986, p. 96-97). Yet we see that clinicians, perhaps inadvertently, regularly do give such feedback, in at least two major ways.

First, clinicians and children, in being sensitive to one another’s activities and especially displays of reciprocity, produce and alter their behaviors moment-to-moment in a contingent fashion. Thus, differences occur with respect to pacing and rhythm both within and across particular dyads engaged in the examination.

Indeed, the interactive structure of the testing sequence seems to be a product of collaborative pacing practices, although such pacing and structure are also responsive to the perceived accuracy of a child’s replies. Collapsed sequences only seem to occur in the context of correct answers, while the full three-part sequence is re-invoked in an environment of errant answering and/or difficult testing prompts. Thus, the type of sequence employed can provide feedback to children on their performance or the difficulty of prompting items.

A second way that feedback occurs is in clinicians’ altering their third-turn acknowledgments between “good” (when an answer is correct) and “okay” (when incorrect). Recall that in episode 1, the clinician pronounced the term “good” after correct answers to “finger,” “window,” “mother,” “table,” and “candy.” When the child errs on “road,” however, CL1 says “okay.” Also, clinicians may give encouraging nonvocal signals when a child answers correctly, while remaining more taciturn when she errs. In Episode 1, CL1 smiles and/or nods at lines 3, 9, 11, 13, and 17, whereas no such gestures are present subsequent to the “rohduh” episode. The pattern is operative throughout the episode.

Smiling is not just a matter of the clinician’s style or independent method of encouraging a child. It seems that the child, when giving her answers, smiles expectantly at the clinician. That is, there may be something of a smiling *sequence* in operation, where the clinician’s smile is a response to the child’s initiation, and the absence of the clinician’s smile may be a *noticeable absence* (Schegloff and Sacks, 1973), or one from which it is possible for the child to draw inferences about her own performance.

That nonvocal nodding and smiling behavior is a crucial aspect of the interactional substrate that can have consequences for the child’s performance is lent credibility from Goodwin and Goodwin’s (1987) consideration of the interactive structure of assessments in ordinary conversation. When speakers reference an “assessable” object, they may provide a characterization that proposes how their recipients are to understand and appreciate that object. Recipients, who are highly attuned to what Goodwin and Goodwin (1987) calls the “participation possibilities” that assessments invoke, may reciprocate by producing an evaluation complementary to the initial characterization. Therefore, assessments are a conversational nexus of organized, collaborative actions. In the testing situation, a child’s answers are assessable objects. Clinicians, in vocal and non-vocal ways, regularly evaluate these answers in third-turn acknowledgments. If these assessments work at all like they do in conversation, children can inspect them to decide what they might implicate for their own concurrent and subsequent activities. On the part of clinicians, then, even slight alterations between “good” and “okay,” smiling and not smiling, or going relatively slow or fast, may provide children with the opportunity to infer how well they are doing.

If children are making such inferences, we do not know exactly what they are, nor how they might influence subsequent behavior. However, it is possible that the famous “Pygmalion effect” (Rosenthal and Jacobson, 1968; Rubovits and Maehr, 1973) or transmission of what becomes a self-fulfilling expectation, is, to the extent that it is real, brought about through the organization of activities in the interactional substrate of educational exams. More generally, our point is that until we know more about this substrate, there may be unknown and uncontrolled influences on testing behavior that are sources of distortion in the scores that children receive.

Conclusion

By discussing issues of standardization, we do not mean to engage in an ironic impugning of educational testing. We cannot claim that these examinations are *unstandardized*, and by no means were our clinician-subjects incompetent or unprofessional. Rather, our aim was to simply describe and analyze an infrastructure of collaborative actions that make generating accountable test scores possible. The interactional substrate is like a scaffolding upon which clinicians depend in order to obtain access to measurable, quantifiable abilities. It is something that underlies other information-generating interviews, such as the survey (Suchman and Jordan, 1990; Schaeffer, 1991). After all is said and done, the reportable score that is the child for the purposes of educational placement, or the attitude that is registered in some poll, depends upon this infrastructure, or substrate, or scaffolding of organized, practical skills. Ultimately, interviews as real-worldly accomplishments are inseparable from the substrate or scaffolding of skills through which participants make both the process and its products observable in their specificity. The clinical signs of deficit, just as the codable manifestations of subjective regard on social issues, emanate from what Lynch (1984, p. 81) has referred to as a “primordial grounding in the life world” (cf. Cicourel, 1982).

Despite our initial lack of interest in the effectiveness of test administration, problematic aspects of the testing immediately stood out as we reviewed our tapes. That is, we saw “mistakes” on the part of the clinician as well as the child, many of which appear not to stem from the inability or incompetency of the clinician, or of the child, but precisely from the interactional competence they both exhibit. That competence resides in a set of skills through which they bring off official testing activities, such as providing a “stimulus” and a “response.” Thus does it appear, in our paraphrase of Garfinkel (1967), that there can be good interactional reasons for bad testing performance.

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Appendix

Transcription Conventions

For the audio portion of transcripts, conventions are adapted from Gail Jefferson's system (for example, see published version in Atkinson and Heritage, *Structures of Social Action*, 1984). Following is a transcription key for gaze behavior; these conventions are adapted from Goodwin, *Conversational Organization: Interaction between Speakers and Hearers* (1981).

Gaze Transcription

1. Clinician gaze is above each utterance. Child gaze is below each utterance.
2. VVVVVVV = gaze directed at test booklet between participants
3. WWWWWWW = gaze directed down on table (especially at score sheet while writing)
4. ----- = gaze is directly on co-participant
5. = gaze is corning toward co-participant
6. ,,,,,, = gaze is dropping
7. ^ = quick movement of gaze upward
8. / = quick movement of gaze downward
9. X = marks where gaze reaches co-participant
10.
 --,,
 (----) = if gaze changes during a silence, the silence is shown with a dash for each two-tenths of a second, and gaze is marked above or below the silence with the regular notation
11.

 (0.4) --- = if gaze does not change during a silence, the silence is recorded with the standard numeric system, and notation is marked above or below wit the regular notation