# Teaching Discrimination of Common Errors in Writing

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The Judge Rotenberg Educational Center (www.judgerc.org) operates day and residential programs for children and adults with behavior problems, including conduct disorders, emotional problems, brain injury or psychosis, autism, and developmental disabilities. The fundamental approach taken at JRC is the use of behavioral psychology and its various technological applications, including behavioral education, programmed instruction, precision teaching, behavior modification, behavior therapy, behavioral counseling, self-management of behavior, and chart-sharing.

In this study we examine the use of using discrimination activities on a computer, to teach twenty common errors found in writing. Participants will complete lessons on the computer, working to a preset level of fluency for correct and incorrect answers. Material will be broken down into different concepts, using multiple examples for each individual concept. Data will be plotted on a standard celeration chart. Using pre-test and post-test data, we will look at generalization of the material.

## Method

### Participants and Setting
There were two participants in this study; both male. Participant one was 18.2 years old, with a full scale IQ of 91 and diagnosis of ADHD, PDD, psychotic disorder and learning disorder. Participant two was 20.6 years old, with a full scale IQ of 96 and diagnosis of ADHD, bipolar disorder, intermittent explosive disorder and personality disorder.
The participants were in different classrooms during the academic day, Monday through Friday, 9AM to 3PM. All participants attended school at the Judge Rotenberg Center and lived in one of JRC's group homes. Each participant worked on a computer that was configured to meet their individual behavioral and academic needs.

### Measures and Instruction
All participants worked on the JRC proprietary software, Just the Facts. They worked through a series of lessons that first presented a sentence on the computer screen, and the participant was required to type if the sentence was correct or incorrect in the appropriate location. An example of a correct sentence is, Before the bill was passed, several politicians voted on it. An example of an incorrect sentence is, Before the bill was passed several politicians voted on it.

The second unit presented the incorrect sentences from the previous lessons the participant was required to type the sentence so that it was grammatically correct.  During the timing, the participant could hit a specific key, to request a visual prompt of the answer.  Prompts included the initial letter(s), of the sentence, and for each additional time the prompt request key was hit, another letter of the answer appeared.  When the student entered a correct response, a green check appeared on the screen and when an incorrect response was entered, a red X appeared on the screen.  Each lesson was worked on, until a pre-set letters per minute rate with 0 incorrect responses and 0 prompts was reached.  The aim had to be met two consecutive times before moving to the next chapter.  The software automatically moved the participant to the next chapter.  Upon mastering a chapter, the student received points that could be exchanged for various rewards, such as free time, items from JRC's Behavior Boutique, or other personalized rewards.

All data were plotted on a Standard Celeration Chart, which included correct responses, incorrect responses, prompts used and the time it took to complete a cycle (Lindsley, 1992). A cycle was defined as a certain number of problems, a certain number of correct responses, or by a pre-determined amount of time.

## Results

Both participants showed improvement in identifying correct and incorrect sentences and correcting grammatical errors.  When given a pretest, and asked to identify if the sentence was correct or incorrect participant one was able to correctly identify 32 out of 40 sentences and participant two was able to identify 30 out of 40.  Neither participant was able to correct the errors in the sentences.  After working through the computer curriculum, post-test data showed that both participants were able to identify 39 out of 40 correct or incorrect sentences and correct all errors.

## Discussion

The data shows that this was an effective way to teach discrimination of grammatically correct and incorrect material, and the correction for the material.  The participants benefited from working to a preset level of fluency and being able to progress at their own pace.  To further determine effectiveness of the curriculum and computer program, more participants would need to complete the curriculum and retention of the material would need to be checked at a later date.

## References

Lindsley, O.R., (1992).  Precision Teaching:  Discoveries and effects.  *Journal of Applied Behavior Analysis*, 25, 51-57
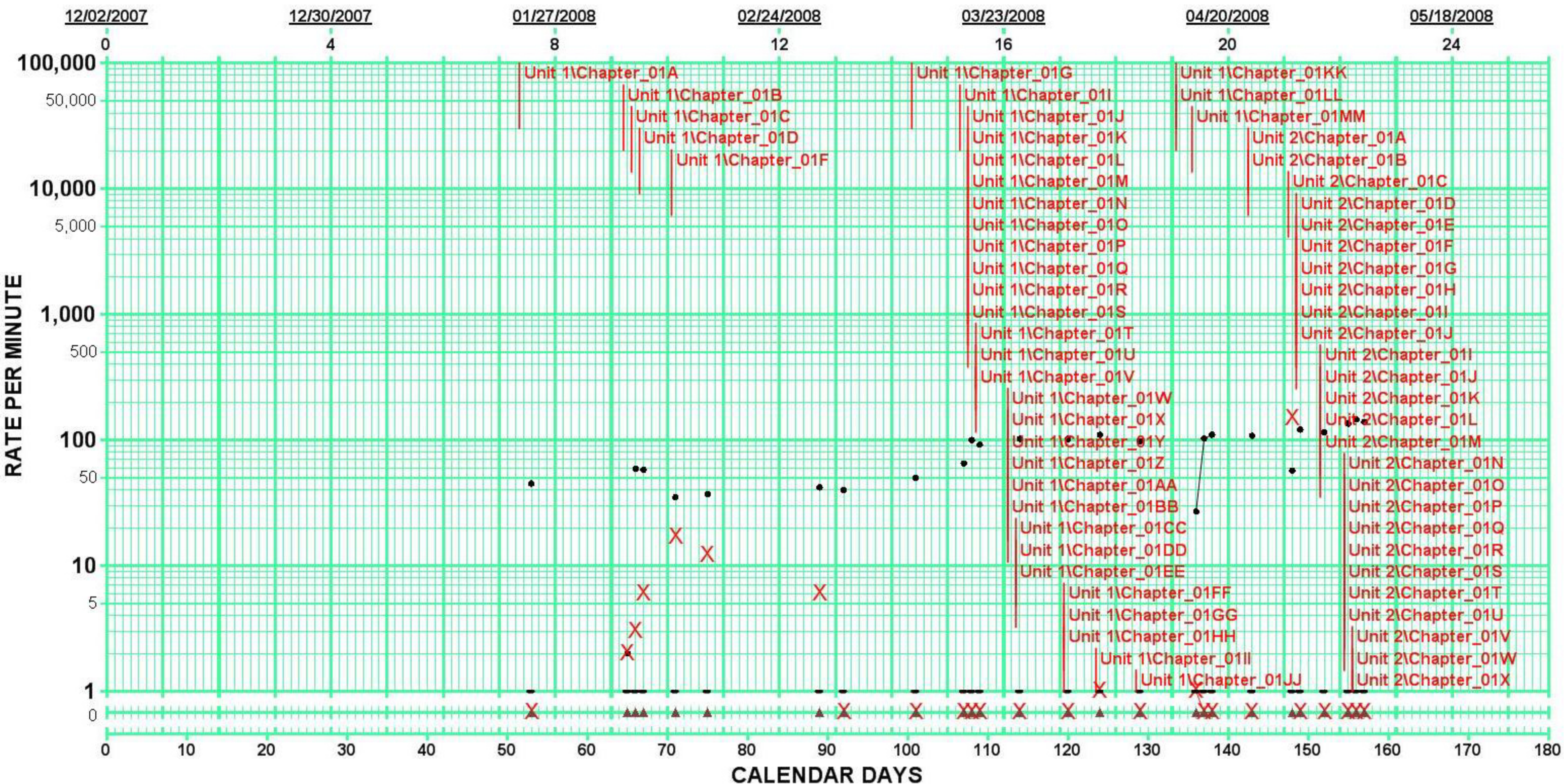
**Figure 1**

*Just the Facts-Composition Errors*
ITEM MEASURED

**DAILY CHART**
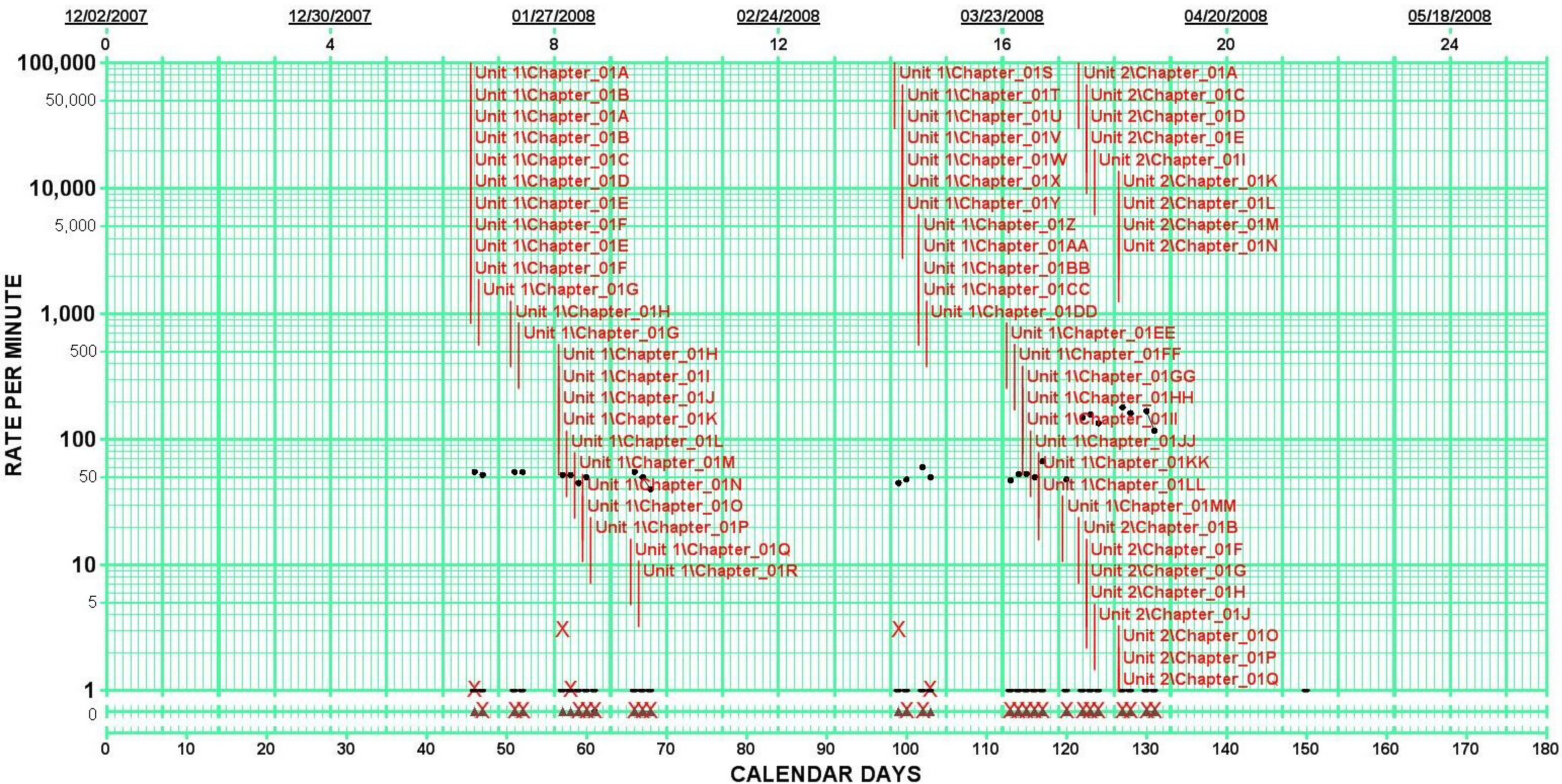
Figure 2

*Just the Facts-Composition Errors*
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