

Response to Embarrassing Challenge

<https://medium.com/ontologik/an-embarrassing-challenge-for-so-called-ai-experts-of-the-ml-dl-ilk-430541838d0a>

Author: James Lewis, james@representi.com

Date: Tuesday, April 28, 2020

Machine learning (ML) and other AI algorithms have difficulty recognizing relationships between people, and other concepts we humans take for granted. If you show a picture to a machine it may be able to recognize shapes in the picture, but it cannot tell what's going on. Walid set a challenge illustrating this problem. He provided two pictures: one in a classroom and the other in a home setting. The challenge is this: A 4-year old asked to point to the picture with the teacher and the picture with the mother will correctly identify the pictures. Provide software that can do the same.

I assume ML can classify and label objects in both pictures, so I send a list of the classifications to Ri (<http://representi.com>), and see how Ri responds. Ri talks with users and can embellish a conversation with context from stories in its library. For this challenge I use the "ri reply" command. "Ri reply" tells Ri to respond to itself, thus removing the user interaction variable for more consistency (Ri is essentially talking with itself). The conversations with Ri provide clues, interpretations if you will, about each picture. I highlighted relevant words and phrases. "Mother" and "teacher" come up a lot, but the other ideas that come up are interesting and can be explored further using Ri's buttons.

It's also interesting to use the strings derived from the pictures to search Google, particularly Google Books. It is interesting that Google search puts images at the top of its results. Google Books returns results with as many of the words in the search string as possible, things like answer keys for primary school books, or results where one or two words on a page match. The search does not provide a sense of what's going on in the picture.

The pictures start on the following page.

Classroom Setting Picture



Recognized in image: smiling woman, girl, boys, children, pencils, desks, chairs, paper

Ri Transcript 1:

James, 9:08 AM

smiling woman, girl, boys, children, pencils, desks, chairs, paper

Ri Conversational English Lit, 9:08 AM

(3) Teach the boys and girls the historical origin of the working class.

James, 9:11 AM

ri reply

Ri Conversational English Lit, 9:11 AM

The teacher then asked two girls, sitting on the front row, to pass out pencils and paper.

James, 9:12 AM

ri reply

Ri Conversational English Lit, 9:12 AM

And there were so many midgets that even the schoolboys were allowed to smoke cigarettes to keep them off--even the schoolgirls.

James, 9:12 AM
ri reply

Ri Conversational English Lit, 9:12 AM
"It would be like one of the great **masters** teaching a **schoolboy** to mix his colours.

James, 9:13 AM
ri reply

Ri Conversational English Lit, 9:13 AM
When the **essays** were handed back to us the **teacher** did not return mine.

Ri Transcript 2:

James, 9:25 AM
smiling woman, girl, boys, children, pencils, desks, chairs, paper

Ri Conversational English Lit, 9:25 AM
The **teacher** then asked two girls, sitting on the **front row**, to pass out pencils and paper.

James, 9:27 AM
ri reply

Ri Conversational English Lit, 9:27 AM
We asked so many **questions** that the **Teachers** forbade it.

James, 9:28 AM
ri reply

Ri Conversational English Lit, 9:28 AM
"Mother thought of getting him one, to travel round with us. There was a lady told her of a very good **teacher**; an American lady--perhaps you know her--Mrs. Sanders.

James, 9:29 AM
ri reply

Ri Conversational English Lit, 9:29 AM
(3) **Teach** the boys and girls the historical origin of the working class.

James, 9:29 AM
ri reply

Ri Conversational English Lit, 9:29 AM

It is the pride of a child and a **schoolboy**. They are little children rioting and barring out the **teacher** at school.

James, 9:30 AM

ri reply

Ri Conversational English Lit, 9:30 AM

And there were so many midges that even the **schoolboys** were allowed to smoke cigarettes to keep them off--even the **schoolgirls**.

Home Setting Picture



Recognized in image: woman, nurture, boy, paper, pencil, table, chair

Ri Transcript 1:

James, 8:55 AM

woman, nurture, boy, paper, pencil, table, room, house

Ri Conversational English Lit, 8:55 AM

"**Ma** auldest's a laddie; he's leevin' the schule gin the simmer holidays.

James, 8:55 AM
ri reply

Ri Conversational English Lit, 8:55 AM
'Elsie's wi' the bairns, and Miss Barton, an' I'm gaun to bide wi' **ma** wee laddie.

James, 8:56 AM
ri reply

Ri Conversational English Lit, 8:56 AM
"**Mom** would've sold it cheap if you'd ever wanted to get rid of the hearse.

James, 8:56 AM
ri reply

Ri Conversational English Lit, 8:56 AM
It was an old woman's room. Even his **mother** was harmless now.

James, 8:57 AM
ri reply

Ri Conversational English Lit, 8:57 AM
The staircase leading to the old woman's room was close by, just on the right of the gateway.

James, 8:57 AM
ri reply

Ri Conversational English Lit, 8:57 AM
But tomorrow? Who knows?" The **motherly** woman sighed. "This is war."

Ri Transcript 2:

James, 9:39 AM
woman, nurture, boy, paper, pencil, table, room, house

Ri Conversational English Lit, 9:39 AM
"**Ma** auldest's a laddie; he's leevin' the schule gin the simmer holidays.

James, 9:39 AM
ri reply

Ri Conversational English Lit, 9:39 AM
As the boy brought them a man passed along the street outside and seeing me waved his hand.

James, 9:40 AM

ri reply

Ri Conversational English Lit, 9:40 AM

Lady Agnes looked across the table at her **mother**, crying:

James, 9:40 AM

ri reply

Ri Conversational English Lit, 9:41 AM

She kept her back to Eddie, was, he sensed, in tears. He said, "**Mom?**"

James, 9:41 AM

ri reply

Ri Conversational English Lit, 9:41 AM

So heedful a writer as Henry James, for instance, on occasion **wrote** so **ungrammatically** that a schoolmaster, finding such **errors** in a **schoolboy's essay**, would be justly indignant.

James, 9:41 AM

ri reply

Ri Conversational English Lit, 9:41 AM

'That!' he laughed, following her eyes. 'That's the Frenchy! There's his **mama!**' pointing a chicken-bone at a lady farther along the table.

James, 9:42 AM

ri reply

Ri Conversational English Lit, 9:42 AM

But tomorrow? Who knows?" The **motherly** woman sighed. "This is war."