

PlotBot: a story spoiling robot

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ABSTRACT

It has been shown that stories in books that are spoiled increase enjoyment of the story by two independent studies. This is useful information for people who struggle with reading books yet have set themselves up for the challenge to do so. It is not unusual for these people to wind up in the libraries, asking librarians for help. In addition, there are also people that regularly read the last pages of a book before reading the rest of the book. We created a robot that spoils stories for people who might have trouble deciding on what to read, or those that regularly do it, in order for them to choose that book and read it with higher pleasure. The same robot also fetches the book in case the potential reader chooses to read the book.

INTRODUCTION

A study conducted from the UC San Diego's psychology department gave subjects 12 short stories, by authors including Agatha Christie, Roald Dahl, and John Updike. Some were presented in their classic form, others with spoiler paragraphs and others where the plots were "accidentally" spoiled. Results showed that readers, on average, rated the spoiled stories to be more enjoyable. The researchers speculated as to why this was the case, one of the hypothesis, is that it unloads cognitive resources.

It is not uncommon for people to ask librarians for book suggestions when they have set themselves up for a challenge to read a book. However, at the same time, it is not unreasonable to assume that they suffer from analysis paralysis, a.k.a the paradox of choice, one reason being why they end up in the library. We asked librarians if this was a common occurrence and they indeed confirmed that this was the case. In addition, they also informed that some people actually read the last chapter of the book before proceeding to read the rest of it. Librarians also ask various questions to make a judgment about what book for the reader could be entertaining. These questions include: favorite movie, or types of movies that they

like, music taste, other interesting books they have read, or games played.

INITIAL DESIGN

We iterated through many ideas for library robots but found it hard to decide on an idea that seemed to be actually useful from a sense of being both useful and one which provides a certain experience. However, a common factor has been the library and books. Such as a recommender robot, a recommender robot for children or simply a glorified "bookfetcher" robot. Most of our ideas could be done equally well or better by human librarians. Initially, we imagined the robot as recommending a random book and immediately show the user a spoiler for that book. The robot would then guide the user to the book. The only available possibilities the user had for interactions was to accept or deny a suggested book, and to ask for a new book once a book had been accepted.

Assumptions made:

- Some people are biased against spoilers.
- Spoilers can make it more enjoyable.
- People will be less negative towards spoilers if they are not told that it is one.
- People come to the library to get book recommendations.
- Spoiled books are rated as more joyful.
- People have an inner will/challenge to read a book despite having a hard time with it.
- The person would rather let the robot pick out books randomly than putting effort into finding one themselves.
- People would rather let a robot spoil for them than a librarian.
- Other people actually read the last chapter of the book before reading the rest of the book.
- The counter-intuitive idea of a robot that spoils books raises curiosity.

PROTOTYPING

Prototype 1

The first prototype was constructed in cardboard. This prototype was poorly constructed and did not contain any mechanical or electrical parts. As such served mainly as a way for us to actualize the physical shape of the robot.

Prototype 2

The second prototype was made using Lego and an Arduino board with stepper motors. However, soon after building the body of the robot we realized that it was not possible to make it move with the available parts, as we did not have any wheels that were large enough to work with the stepper motors. Additionally, the prototype was quite heavy. Due to these reasons, we abandoned the second prototype quickly.

Prototype 3

Finally, we decided to use an ice cream box as the body of our robot, so that it could also contain the Arduino components inside. For the wheels, we used a 3D printer to make personalized wheels that would fit the stepper motor. For the interaction, we used a smart-phone that would display the face of the robot, reflecting its emotions. This prototype was abandoned due to technical problems with the stepper motors.

Only after we came up with the idea of a "spoiling" robot that could roam in the library did we seek out the expertise from the librarians. In order to confirm the legitimacy of our idea.

Feedback

It was agreed by the majority of the people we talked to that there would definitely be a demand as people often go and ask them for suggestions. It was also pointed out how it would be useful from the perspective of librarians, as the robot would lead the users to the chosen book. In doing so, the librarian assistants would be able to focus on other tasks instead of going back and forth in the library. Furthermore, the idea of an interaction with a robot might be perceived as pleasant especially by children or people with autism. However, there were different points made, from which we could have improved our initial design: The user should be able to choose from given genres, otherwise, the robot may point a book from a category the user does not enjoy. In addition, users often have in mind what genre they want to read. The user should be aware of the purpose of the robot, spoiler should not be given unexpectedly. The interface should be fast and simple, interaction should be intuitive and the user should not spend the time to figure out what to do. It would be useful to add some level of a spoiler, in order to allow the user to choose how much of the book wants to be spoiled. As a matter of fact, spoilers are perceived as negative towards the enjoyment of the book, so some users may not want to be spoiled the entire ending. Users may have a preference for a humanoid robot.

Reiterated design

Given the feedback from the interviewed sample, we implemented an option to allow the user to choose the level of

spoiler the robot would give to them. This is important considering that spoilers may, by some user, affect negatively the experience of a book or a movie. Moreover, as the interaction starts, the robot prompts the user for a category to be chosen among the given ones.

Final prototype

Since our physical prototypes had all failed because of technical reasons, we decided to create a virtual prototype instead. This was done through a slideshow containing links that represented the actions available to the user. Each slide also contained an illustration of the robot showing how it reacted to the user's actions.

Interaction flow

The user wave to the robot to activate it. The user chooses a category and chooses spoiler level. The robot spoils a book for the given category and spoils it. The user is then brought to the book. The user chooses whether to get the book or not.

CONCLUSION

There is a lot that could be said about the design, the reasons behind it and the possible directions that could have been taken. First, of, the library visit for feedback should have happened earlier in our project. A lot of time was consumed on finding a relevant idea but feedback from the librarians could have been extremely useful like they proved to be later in the project when we had an initial design. An obvious criticism is why is this meaningful? Could people simply not read the Wikipedia plot for themselves before deciding what book to read? Why would the robot even be inviting?

The idea, to invert the purpose of the way books are supposed to be read is a novel one. However, the robot's interaction can obviously not rest on a counter-intuitive idea alone.

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