Sherwood Rise: An Experiment in Augmented Reality, Mobile Phones and the Future of the Book

Concept & development by Dave Miller

Story by Dave Moorhead

Post doc at University of Bedfordshire 2013

A privileged elite are in control, waging war on the poor, stuffing their own pockets and ransacking the economy. Democracy is now a meaningless label. The media has a simple agenda ... to bury the truth.

Yet, in a forgotten housing estate in the suburban wastelands of London, an urban hacker gang are fighting back. Welcome to ...

Sherwood Rise

They call themselves "The Merry Men" and their leader is Robin, a beautiful, intelligent young woman, with a passion to reveal the truth.

"Sherwood Rise": the augmented reality transmedia book, currently in development, and part of the UNESCO "Crossing Media Boundaries" project.

David Miller (Post Doc): concept, design, AR
David Moorhead (PhD student): screenwriter, adaptations

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Introduction

Sherwood Rise was an artistic experiment in the future of the book

- Challenge was to expand a traditional paper book using new media technologies - particularly mobile phones

- Sherwood Rise is a participatory & interactive digital story told through newspapers, mobile phones, blogs, email and Augmented Reality

- The AR allows multiples voices in the story - tells the story from different and often opposing perspectives

- It's also used as interface to the story - the reader changes and controls the story and outcomes (takes sides within the story)

- A working prototype of the story was designed and developed

- This presentation describes the evolution of the prototype - how ideas developed and progressed, how the story functions.
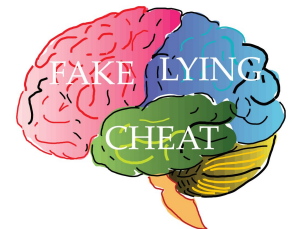
AR and books

- AR pop-up children's books are well established

- Mostly they extend a traditional book - usually a picture or drawing in a pop-up book triggers AR software on a mobile phone

- AR overlays usually in the form of images, sound, video, animation and sometimes small interactive games.

- AR used in artistic literary AR book experiments such as "Between Page and Screen" by Amaranth Borsuk (2012) where print and digital are interwoven.

- But - these uses of AR are superficial in that virtual overlays float over the physical book. They do not change or alter the physical book, even if the AR is interactive in some way.

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AR and books

- Sherwood Rise aimed to go beyond limited interaction of existing AR pop-up books, and use AR to change the content of a printed/ physical/ paper book

- Wanted to closely integrate the (virtual) AR and the (real) paper book, so the virtual would affect/ alter the real, so they would work together as a cohesive short story (a short novel).

- An exciting possibility was for the two different media (paper book and AR) to tell a story simultaneously in different voices - even tell the same story from opposing viewpoints.

- This would set up effectively a (dynamic) argument within the story, and the reader could adopt a position within the argument, even take sides within the story.

The first AR novel

- Sherwood Rise was the world's first AR novel

- It consists of a digital story and a physical book, working in tandem

- The AR would float in the "cloud" above the paper book, but also be part of the book

- The intention was that the AR would be able to alter the actual paper book

- Readers would read, write, play and experience the story through interaction and participation with both the paper book and AR

- The big challenge was how to achieve this ...

Story & format

- Story was inspired and influenced by currents events at the time - the frustrations and anger since the financial crisis, Occupy, "V for Vendetta", austerity. Sherwood Rise aimed to tap into the mood of frustration and anger

- Desire to simulate a revolution within a story

- Themes such as the establishment versus the people, 1% versus the 99%, financial corruption, mob protests

- The work came together at a time when newspapers were being investigated (the phone hacking scandal) and themes of media power and control, what is "the truth"

- All these feed into the work.

Adaptation

Dave Moorhead – initially wrote short story based on traditional Robin Hood folk tale.

Story about social unrest on a forgotten housing estate.

Traditional tale of revolt & dissent brought up to date

Austerity imposed on the poor by a privileged corrupt elite. A gang of "terrorist outlaw hackers" the 'Merry Men', led by a charismatic young woman called Robin, fight back
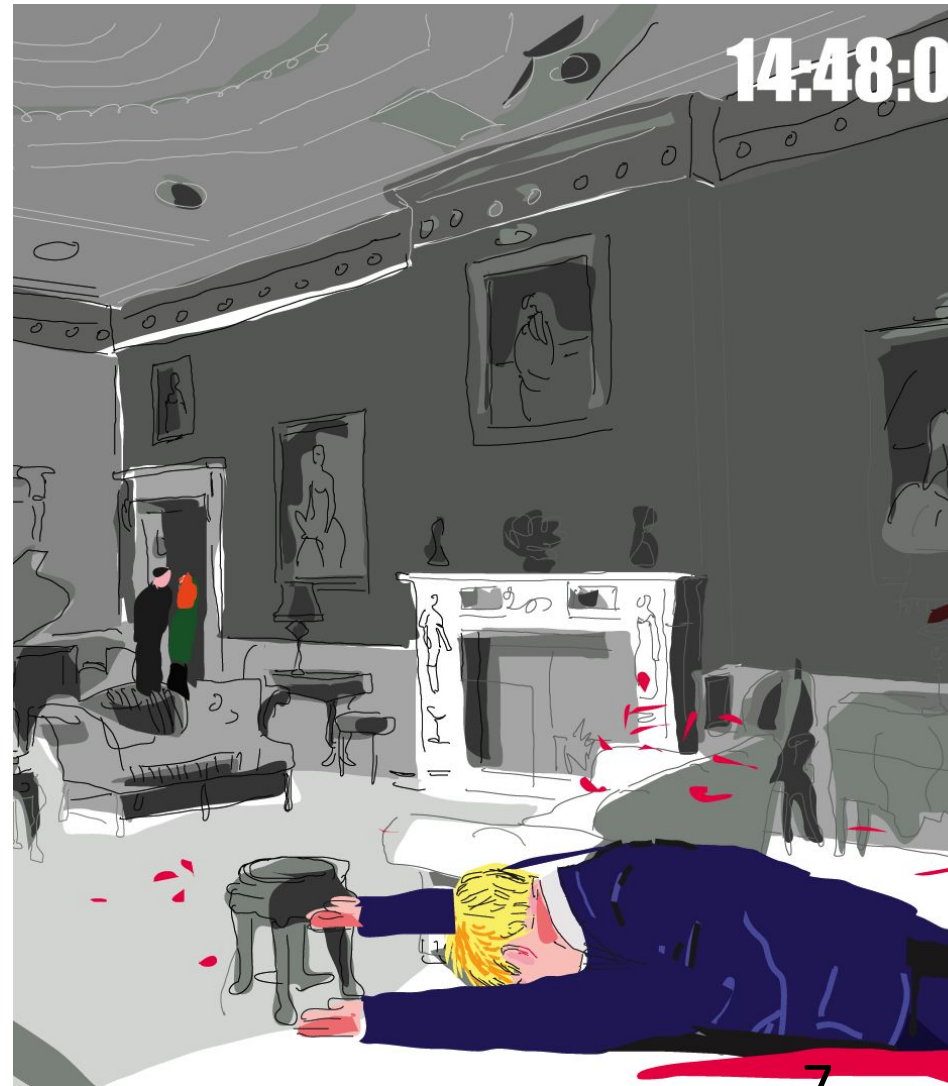
Oppositions

- The aim - to tell a story simultaneously in different voices, to tell the same story from opposing viewpoints.
- For the reader to engage in a discussion or argument within a story.
- Oppositions were set up within the story which readers could lean towards, take sides, to shape the story that they would simultaneously read, write and experience.
- Characters within the story would communicate with the reader, to influence the reader's actions.

Artistically the project centred around oppositions, binaries, extremes, dichotomies:

- In terms of the media and technology: real v virtual, open v closed.
- Through the Sherwood Rise story, which dealt with truth v lies, establishment v the people, the powerful v powerless, 1% v 99%.
- Robin Hood folk tale - the ambivalence in the story - hero/ villain?
- The argument or discussion within the story, taking sides within the story, counter narratives.

Research goals

The primary research goal was not to investigate how to design AR media, but rather how AR on mobile phones could allow users to experience and play with the relationship between virtual (digital) and real (printed) texts, to navigate and shape a story containing different and conflicting voices.

Other research interests were:

- AR activism
- The politics of AR and storytelling/ news, contested content
- Revealing hidden stories within a fiction
- The reader experience with AR books
- Aesthetic possibilities of AR stories

Challenges

- How use AR to alter & affect a printed/ physical book?

- AR is digital, it can be dynamic, whereas a physical real book is static.

- But how to handle the static versus dynamic aspects?

- Is it a book or a game?

The printed book as a closed system

- Modern printed books are "closed" technologies compared to the manuscript codex, in that printed books are formally complete, self-contained, and reproducible as identical copies.

- This project considered where future AR books might fall within this dichotomy of open/closed technologies for organizing information spatially, where the AR is considered "open" and the printed book "closed".

- The AR is open and dynamic - the digital content is provided by a network and databases, and can change often, and potentially infinitely. A printed book is self contained and static, it cannot be changed.

- But a printed book *can change* when books are published in serial form or as editions (also traditional formats). When time is introduced as a factor in the storytelling, then it becomes possible to change the printed book, and the printed book can be more open.

- **We took advantage of this - we decided to tell a printed story as editions of newspapers over a limited time period.**

Story told through newspaper editions

- In Sherwood Rise you receive a customised newspaper - over 4 days.
- Pictures in the newspaper trigger AR.
- The reader interacts with the AR and this dictates what version of the newspaper they receive the following day.

How does it work?
- A different newspaper arrives each day for 4 days - a PDF is emailed to reader.
- The version of newspaper received depends on how much they have actively supported or helped Robin - the reporting of news events are changed by interactions with the AR - there are 2 possible versions of each newspaper per day

In order to record the reader's choices, the reader must first register - the system needs to know who they are and to store their choices in a database, as they proceed over the 4 days.

There are 3 platforms for the story - web/email, smartphone AR and newspaper.

Each newspaper edition is written as blatantly biased reporting, as left wing (ie Robin) or right wing (the establishment) versions, along lines of *Punch* magazine. AR content includes comics and illustrations, mini flip animations and scrollable comics.
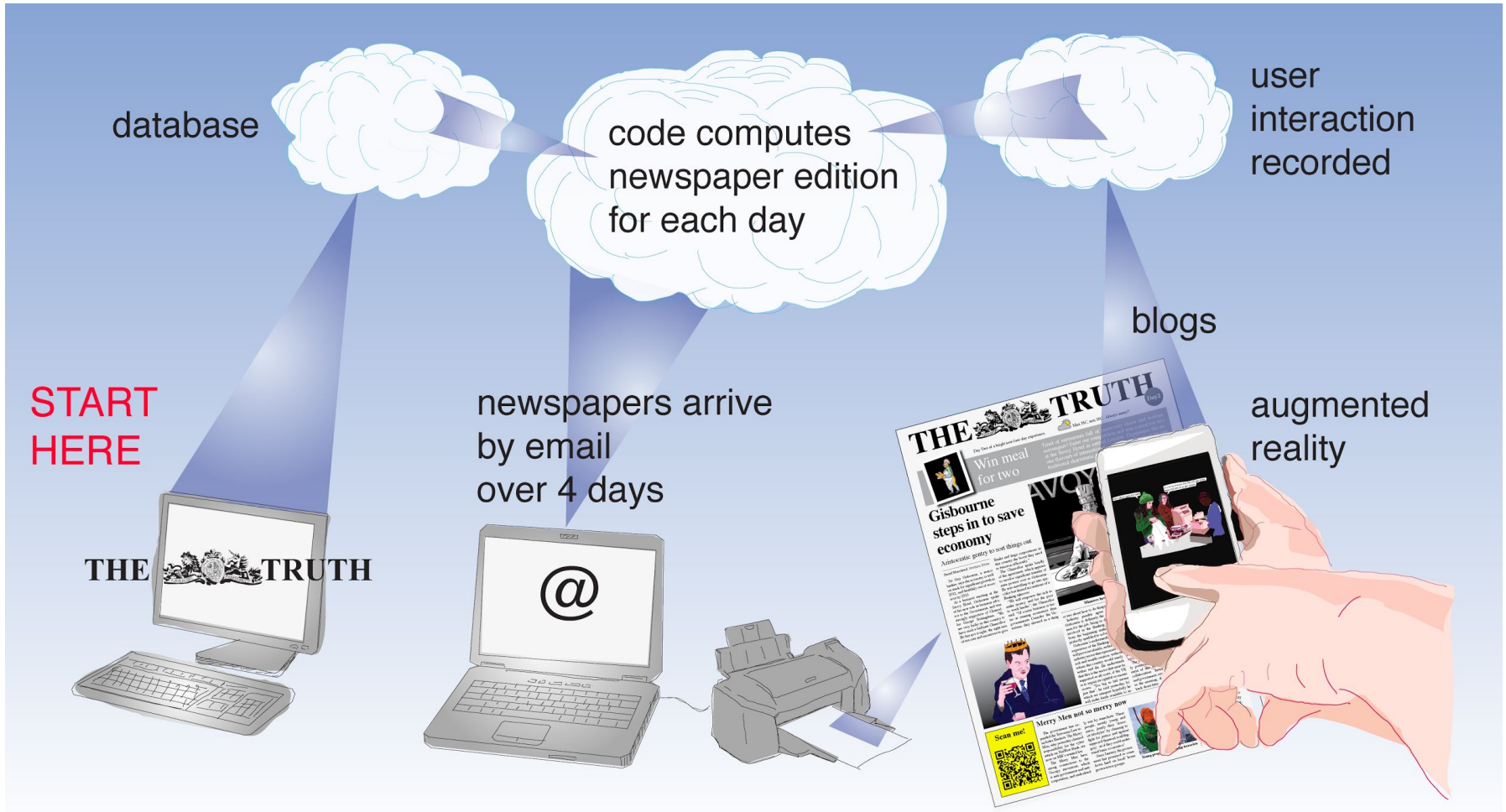

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Database - score value
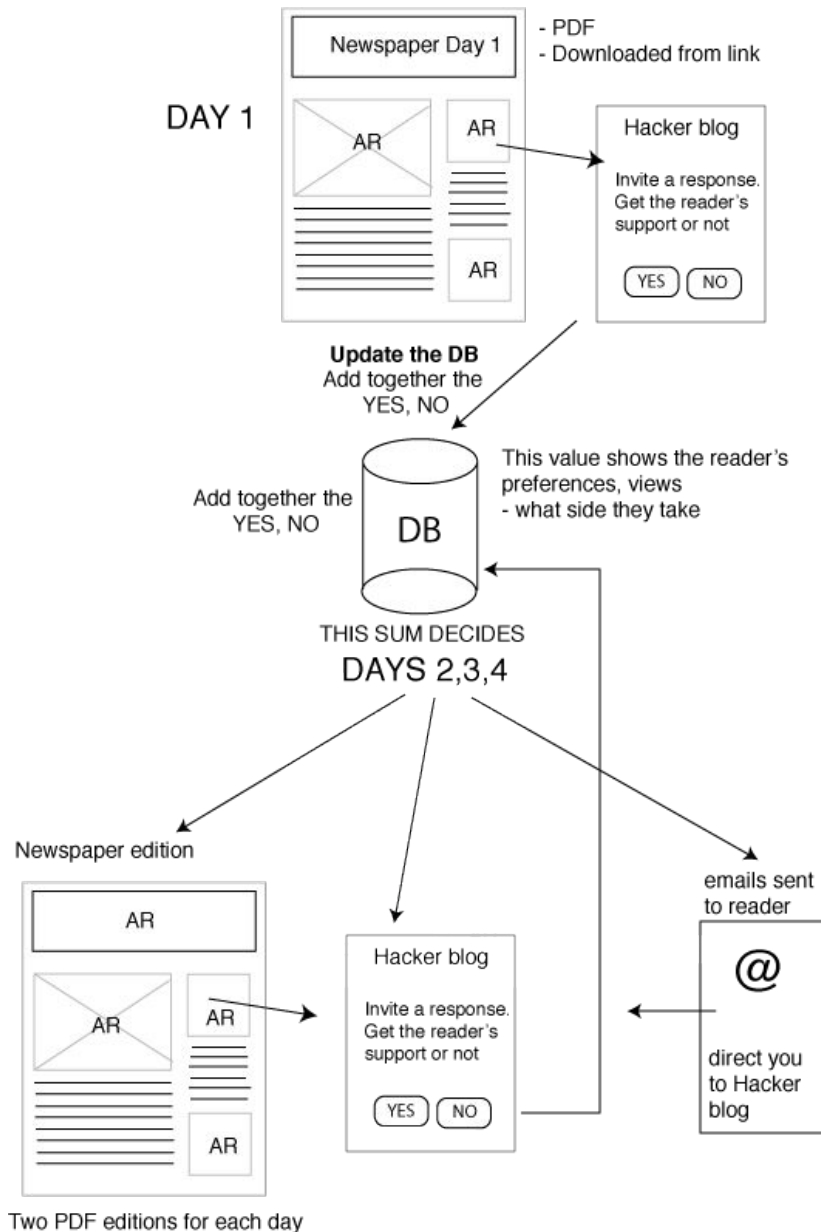
- Reader interactions/choices in the AR segments are recorded in a database that calculates a score value.

- Each day, there are 2 versions of the newspaper, and the version the reader gets depends on their current score in the database.

- There are 7 versions of the newspaper in total (first day plus 2 per day for next 3 days)

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How it works

- Subscribe to the newspaper

- Newspaper arrives as PDF via email, each morning

- AR (X ray specs) - reveals the truth hidden in the newspaper

- The AR opens up blog posts - which you interact with to update a database

- This then dictates which version of the newspaper and AR and emails (from either Robin or the establishment) you receive the next day.

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Overview - How it works

database

code computes
newspaper edition
for each day

user
interaction
recorded

blogs

START
HERE

newspapers arrive
by email
over 4 days

augmented
reality

THE TRUTH

@

THE TRUTH

Win meal
for two

Gisbourne
steps in to save
economy

Aristocratic gentry to sort things out

Merry Men not so merry now

Scan me!

Technology

- Objective C or java was above my level of coding expertise.
- Increasing number of browser-based AR apps, which make AR development easier, in HTML5, javascript and PHP.
- I settled on a technology called **Junaio**
- Junaio was badly documented but it was free and it worked well
- Sadly Apple bought the company and shut down Junaio!!!
- So my prototype doesn't run anymore
- I plan to rebuild it again but not sure which AR technology to use

Sherwood Rise

Aesthetics of AR

- AR/ Junaio was an interesting medium to experiment with artistically & visually

- Overlaying images - both drawn and photographic - many possibilities for collage

- Made use of the pseudo 3D effect - using z plane to give vertical separation/ illusion of depth, and could explore from multiple angles

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Adding game and pervasive media aspects

- We added game aspects to the story, leading to a variety of different endings, depending on your decisions
- This dynamic story would exist in the AR - triggered by the pictures in the newspapers
- We wanted the reader to influence the story and to collaborate in making it
- The intention was for the reader to form a relationship with the central character in the story, Robin Hood, so the reader becomes part of an illegal group of outlaws, becomes implicated, takes sides. And this affects how they go forward in the story.
- We thought about how the AR could reveal the truth, and the AR you get each day depends on the decisions you take/ have taken. So there are two different versions of the AR for each day.
- We decided to add in fake messages and ambiguous emails, into the story 'mix', to give the interactive story more of a transmedia format, with aspects of pervasive media, making the story more realistic. For example Robin can personally email the reader.
- Each day - depending on your interactions - the newspaper, the AR and emails all change.
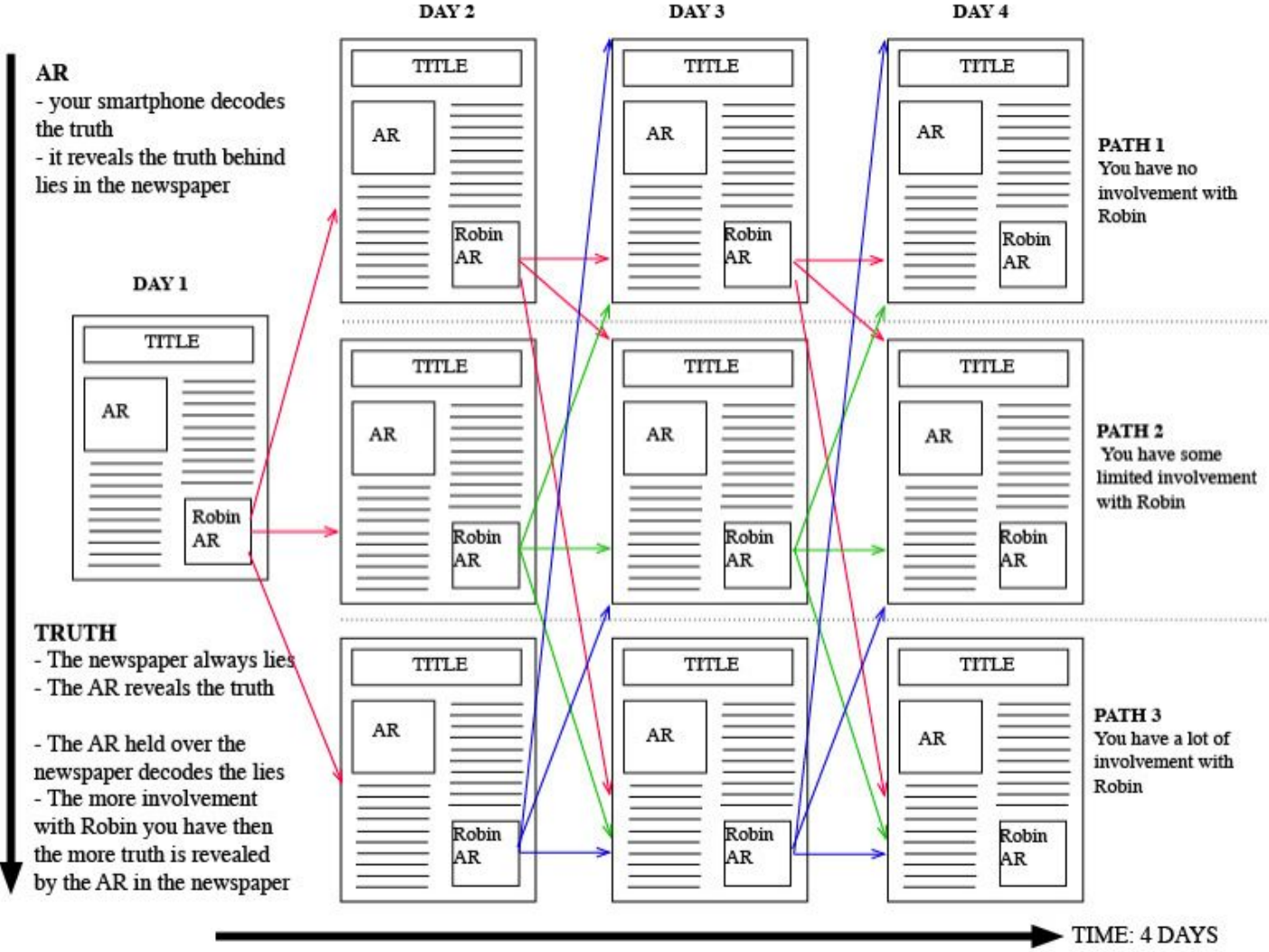
TERRORIST

"Little" John

An enormous muscular, intimidating man.
An amateur boxer, has a soft center &
incredible loyalty.
Do not approach.

SECURITY ALERT!

Our scanner has detected a security violation.
The incident has been reported.

Inappropriate augmented reality material is
hidden in this newspaper.
Source: cyberterrorist group "Merry Men".

Click here for further advice

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Sherwood Rise

The AR does three main things

1. Disrupts the usual linear flow of the printed book, introducing a game-like aspect, so that the AR becomes an integral part of the total reading experience

2. Acts as a "truth decoder" decrypting the packaged news or revealing the 'invisible' truth

3. Enables other voices to speak within the story giving counter narratives, and forming a power struggle within the story.

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Story interaction

The structure

- Sherwood Rise originated as a 5-page story, with a further synopsis of backstories of the characters written by *David Moorhead*.

- Visualising the characters in drawings based on his descriptions, I contributed to the characterisation and separated out parts of the script, dividing the story into narrative layers.

- We wanted to give the story game-like properties drawing on the genre of 'Choose your own adventure' books. The story unfolds over 4 days, changing the AR book into a time-based narrative.

- We faced many challenges in terms of adapting the story for our purposes, and lots of issues involved in trying to make a coherent narrative/ story experience through a range of media, devices, story fragments and game play.

- Dave had to adapt his story to work in multiple format/ platforms. Even adapting from the original story to newspaper format was challenging.

Alternative paths through the story

Note

This design shows 3 paths - we only had time to build 2

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Story rules

(1) If you don't help Robin at all (RW path)

- The newspaper message gets more severe and cruel
- The baddies lording it over the peasants - austerity for the poor, bailouts for the rich
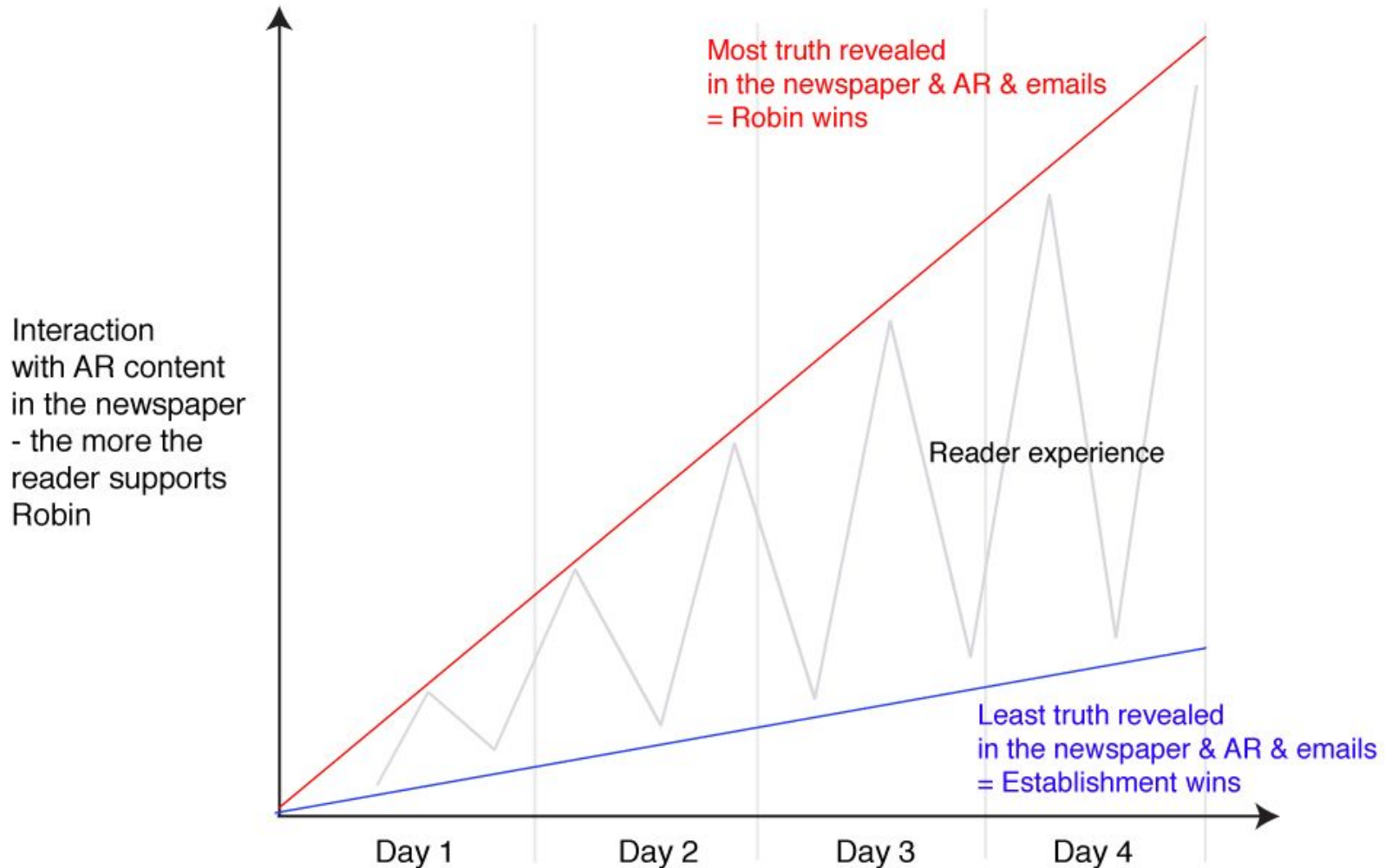- Newspaper is full of lies - gloating, goading

(2) If you help Robin … a lot (LW path)

- The status quo goes into crisis mode - serious rebellion taking place - and the newspaper message gets increasingly frantic/ panicky
- Until - crack - Robin is in charge of the newspaper - new owners.
- Then newspaper changes its title and tells the story from Robin's perspective.

- Your decisions make the story and the outcome
- You shape the news
- Supporting the rebels & make the revolution happen
- By not supporting them the status quo prevails
- 2 main paths – 2 sides to the story - and you move around within them

- This affects the content you receive the next day. The newspaper, AR and emails all change to reflect the current "winner" in the story at any one time.

- You choose to be be part of a revolution – or not…
- You are challenging the power within the newspaper/ within the story

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Revealing truth

There's a power struggle going on within the story!

Interaction with AR content in the newspaper - the more the reader supports Robin

Most truth revealed in the newspaper & AR & emails = Robin wins

Reader experience

Least truth revealed in the newspaper & AR & emails = Establishment wins

Day 1   Day 2   Day 3   Day 4

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Some feedback and final thoughts

Simulating a revolution

A strong desire that ran through the development of the work was to simulate a revolution within a story. The idea of "what if?" and if you could feel part of a revolution, be part of it, even shape it, or maybe not, maybe you side with the establishment. How would you feel? What would you do? The project tries to show the reality and the horror of your choices.

Game aspects

The game aspect was limited and some sample users found it too basic. The end result was more of a book than a game, more of an interactive simulation experiment that you could be part of. More of a book with some game aspects than a game itself. The interactive structure followed a tree/hierarchical structure, rather like a text adventure or "choose your own adventure" book.

Journalism and the media power

Newspapers have an agenda and tell the news in a specific way. There are of course many news stories that do not get mentioned, and newspapers generally dictate which news we receive. The AR within this story system challenges or contests the news, enabling different views of the same news stories, through different voices. The project is about fighting for the truth - but really it's about choosing different versions of the truth.

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