

Best fit Approach

'The approach used in assessment in the application of assessment criteria is a "best fit" model. The examiner or teacher applying an assessment criterion must choose the achievement level that overall best matches the piece of work being marked. It is not necessary for every detailed aspect of an achievement level to be satisfied for that level to be awarded but it must reflect the balance of student achievement against the markband. For example, if student work matches two of the three requirements within a markband but one is seriously lacking, the student should be awarded for the strands that have been met well, but the mark awarded should be at the lower end of the markband to compensate for what is lacking in one strand. If the level of student work spans multiple markbands, compensation depends on the performance in the higher order skills. It is worth noting that the highest level of any given criterion does not represent perfection'

Note: Before marking, please familiarize yourself with the pre-release material, all sources, the questions and the markscheme.

***These are the command terms used throughout the markscheme.**

Please note that spelling errors should not impact the marks awarded in any part of the examination.

Command term	Definition
State*	Give a specific name, value or other brief answer without explanation or calculation.
Outline*	Give a brief account or summary.
Describe*	Give a detailed account or picture of a situation, event, pattern or process.
Explain*	Give a detailed account including reasons or causes.
Discuss	Offer a considered and balanced review that includes a range of arguments, factors or hypotheses. Opinions or conclusions should be presented clearly and supported by appropriate evidence.
Create	To evolve from one's own thought or imagination, as a work or an invention.
Demonstrate	Make clear by reasoning or evidence, illustrating with examples or practical application.

Question 1
Reference 6

EXPOSING THE MONETIZATION OF DISINFORMATION

Report from the *Global Disinformation Index*

MENU



Global Disinformation Index (GDI)

Our story

Disinformation has become a business. Today's internet business models reward engagement above all else. These models monetize attention without considering the quality of the content garnering that attention or the harm it may cause. There is a robust and growing community of industry, policy, and civil society supporters pushing for change of this ecosystem, but they all need data to inform their actions.

The Global Disinformation Index (GDI) was born out of this need for data, specifically the need for transparent, independent, neutral disinformation risk ratings across the open web. The GDI's founders recognized early on that in order to disrupt the business model of disinformation, commercial companies, researchers and policymakers alike need access to independent ratings of news sites' disinformation risk.

Thus, the GDI was established in 2018 as a not-for-profit entity built on the three pillars of neutrality, independence and transparency.

Climate change disinformation is being funded by advertising.

The Global Disinformation Index (GDI) estimates that advertisers will unwittingly provide:

US\$36.7 million*

to 98 climate change disinformation sites on an annual basis

* Annualized run rate based on data gathered between 15 March 2021 and 25 October 2021 on 98 sites. Excludes advertising against disinformation in all other languages. Open-web content only: excludes advertising on

disinformation on social media platforms and video platforms.
www.globaldisinformation.com

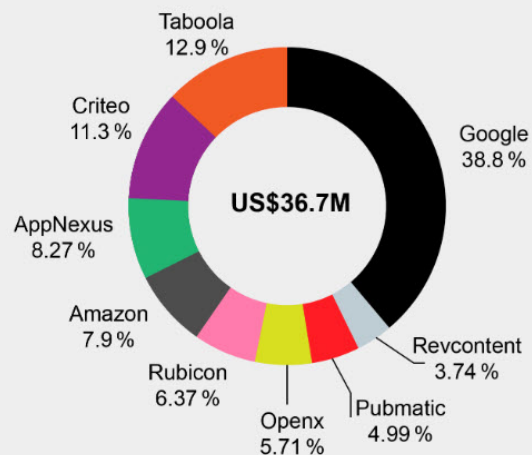
Illustration of how advertising companies are funding climate change disinformation.

We estimate that:

- Google, Taboola, and Criteo together account for 63 % of the total, or US\$23.1 million, in advertisement spend ending up on the climate change disinformation sites.
- Google is the largest contributor of monetizations to climate change disinformation sites, with 38.8 % share.
- Previous reports on other types of disinformation have shown Google's share at around 70 %, suggesting they are actively working to reduce funding the climate disinformation.

Source: GDI's monitoring of disinformation sites between 15 March 2021 and 25 October 2021 on 98 sites.
Note "APPNexus" trades as Xandr.

The chart below shows the distribution of how advertising companies have funded climate change disinformation.



Examples of how brands are funding climate change disinformation.

Brand advertised	Brand details	Advert served by	News site	Detail of disinformation in the news report
British Standards Institution	A standards regulator for products and services in the United Kingdom (UK)	Google	Unity News Network	Climate change consensus is not real.
Amazon	A global online marketplace	Amazon	American Greatness	"Climate alarmists" are going to cause rebellion and war and promote socialism.
Thomas' (Bimbo Bakeries)	A breads and baked goods company based in the United States (USA)	Xandr		
The Nature Conservancy	A global environmental organization	Google	The Federalist	Climate change consensus is not grounded in science.
John Hopkins University	A research university based in the USA			
MoneyGram	An international cross-border money transfer company based in the USA	Google	Breitbart	Study disputes climate change emergency.
Braun (Proctor & Gamble)	A consumer products company based in Germany	Amazon	Washington Examiner	Scientists are being victimized for disputing climate change.
BP (British Petroleum)	A global oil and gas company based in the UK	Google		

GDI's monitoring of disinformation sites between 15 March 2021 and 25 October 2021 on 98 sites.

Glossary

Disinformation: False information deliberately spread to deceive people.

Reference 8

Related concepts in mathematics

Approximation	Change	Equivalence
Generalization	Models	Patterns
Quantity	Representation	Simplification
Space	Systems	Validity

Related concepts in language and literature

Audience imperatives	Character	Context	Genre
Intertextuality	Point of view	Purpose	Self-expression
Setting	Structure	Style	Theme

Discuss how mathematics and language and literature contribute to the monetization of disinformation. In your answer you must:

- explain how mathematics contributes to the monetization of disinformation
- explain how language and literature contribute to the monetization of disinformation
- explain how the synthesis of both subjects impacts the monetization of disinformation
- use the concepts from both mathematics and language and literature to support your answer.

(12 marks)

Note: Responses that do not directly answer the question i.e. are not about monetization of disinformation, receive no credit

Note: The related concepts must be discussed in the context of monetization of disinformation. If the context is anything else, responses score 0 for that strand, and it is not to be considered an attempt.

Marks	Descriptor
0	The student does not achieve a standard described by any of the descriptors given below.
1-3	The student: <ul style="list-style-type: none"> • states how mathematics contributes to the monetization of disinformation • states how language and literature contribute to the monetization of disinformation • states how the synthesis of both subjects impacts the monetization of disinformation.
4-6	The student <ul style="list-style-type: none"> • outlines how mathematics contributes to the monetization of disinformation • outlines how language and literature contribute to the monetization of disinformation • outlines how the synthesis of both subjects impacts the monetization of disinformation • attempts appropriate related concepts for maths or LAL.
7-9	The student: <ul style="list-style-type: none"> • describes how mathematics contributes to the monetization of disinformation • describes how language and literature contribute to the monetization of disinformation • describes how the synthesis of both subjects impacts the monetization of disinformation • uses appropriate related concepts for maths and LAL.
10-12	The student: <ul style="list-style-type: none"> • explains how mathematics contributes to the monetization of disinformation • explains how language and literature contribute to the monetization of disinformation • explains how the synthesis of both subjects impacts the monetization of disinformation • uses appropriate related concepts for maths and LAL explicitly connecting to the monetization of disinformation.

Question 2

Reference 1

Video script:

Over time the number of advertisements we are exposed to on a daily basis has increased from approximately 500 in the 1970s to an alarming 5000 today.

We can be easily persuaded by this constant bombardment of messaging and not even realize it.

This form of advertising uses a variety of propaganda techniques that are designed to manipulate people's actions and appeal to their emotions and beliefs.

Testimonials seek to entice people by involving celebrities or respected individuals to endorse a product or an idea. The technique seeks to promote the product or idea through trust and belief in the celebrity or respected individual.

Beware: People are paid to promote these products and ideas.

“Jumping on the bandwagon” describes people choosing to go along with the rest of the crowd. Bandwagon propaganda creates the impression that there is widespread support for a thing or idea. These messages create a sense of peer pressure to join in.

Bandwagons seek to entice people by encouraging them to join the crowd. Beware: Bandwagon claims are often not supported by evidence.

Name-calling seeks to undermine the reputation of people, ideas or institutions. Name-calling will be negative and unflattering toward a competing product or idea and can use words and/or images.

Glittering generalities uses slogans to appeal to peoples' imagination, senses and emotions. This technique often has memorable sayings or visual stimulus.

Beware: This technique does not provide detail or facts.

Card stacking presents positive and negative facts and figures, usually for competing products or ideas.

Positive facts and figures will be promoted for a product or idea. This may then be contrasted by negative facts and figures for the competitor.

Beware: Some facts and figures may be deliberately left out.

Plain folks uses slogans and promotion techniques that attempt to mirror the target market. For example, the advertiser will use “ordinary”-looking people to attempt to gain trust from the general population.

Transfer is a technique that links emotions and feelings associated with established images or products with a new product or idea. It attempts to build familiarity and can be used to persuade a person to like or dislike a product or idea.

Beware: There may not actually be connections between the two products or ideas.

Reference 4

AROUND THE WORLD IN IDIOMS

United Kingdom

"To be economical with the truth"

Meaning: To leave certain parts of the truth out

"Spread like wildfire"

Meaning: To pass information, fact or fiction, from one person to another very quickly



Russia

"Hang noodles on someone's ears"

Meaning: To fool someone

China

"To tell only half the truth is to give life to a new lie"

Meaning: To create false information

Reference 5

Click on and to reveal more information.

Background: The following data and findings have been taken from a study published on 9 March 2018 in the journal *Science*, by researchers at Massachusetts Institute of Technology (Vosoughi, S., Roy, D., & Aral, S.) The study explored how and why true and false news spreads differently.

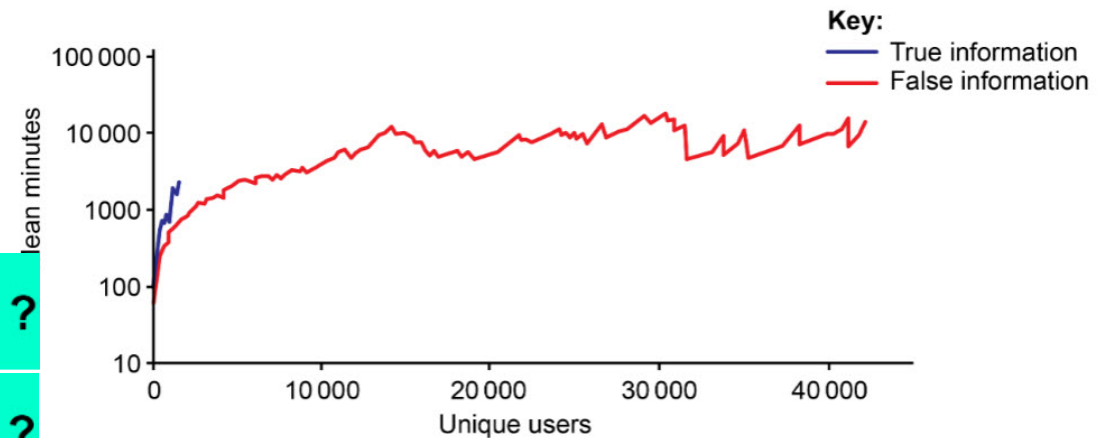
Abstract

We investigated the spread of all of the verified true and false news stories distributed on Twitter from 2006 to 2017. The data comprise around 126 000 stories tweeted by approximately 3 million people more than 4.5 million times. We classified news as true or false using information from six independent fact-checking organizations that exhibited 95–98 % agreement on the classifications.

Background

Unique users

The graph below shows the number of minutes it takes for true and false information to reach any number of unique users.



126 000 rumors were spread by ~3 million people.

The top 1 % of false news reached between 1000 and 100 000 people.

The truth rarely reached more than 1000 people.

False news reached more people than the truth.

Falsehood spread significantly further, faster, deeper, and more broadly than the truth in all categories of information.

False news was more interesting than true news, which suggests that people are more likely to share interesting information.

False news spreads more than the truth because humans, not robots, are more likely to spread it.

Abstract

Unique users

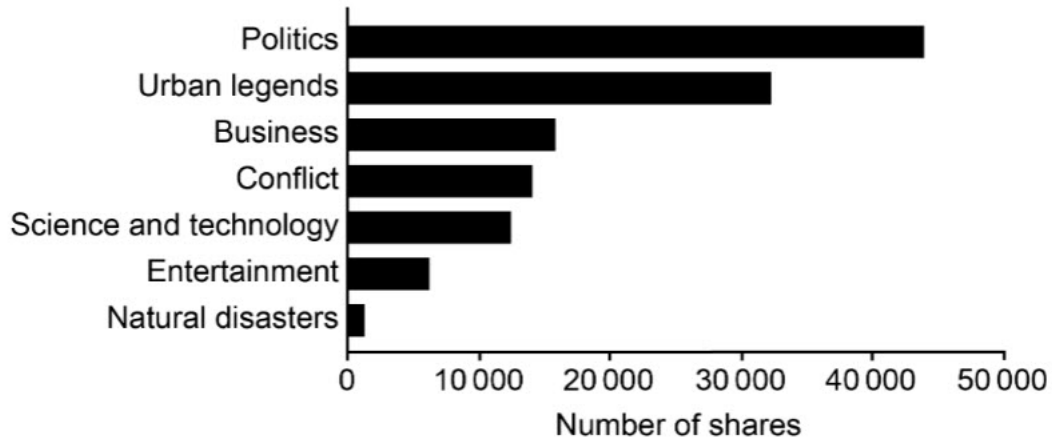
Shares

Reference 5

Background

Shares

The chart shows the total number of shares across the seven most common categories.

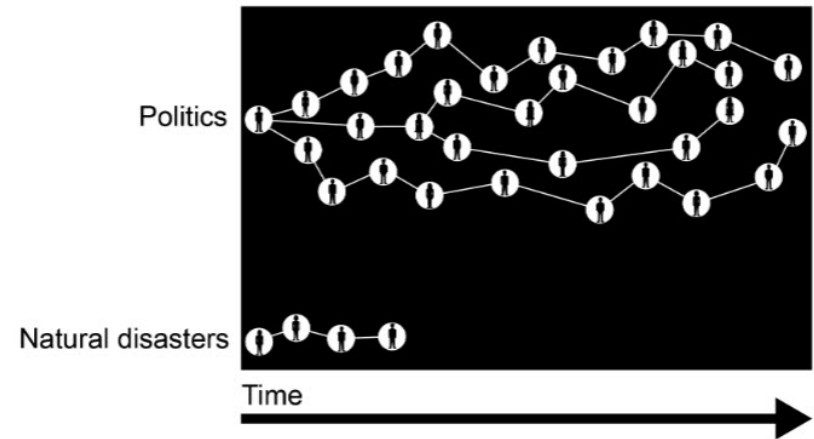


False news can drive misallocation of resources during conflict and natural disaster, the misalignment of business investments, and misinformed elections.

Background

Shares – Politics v Natural disasters

The illustration shows how political and natural disasters are shared.



False political news reached more people faster and went deeper into their networks than any other category of false information.

There is no such thing as freedom of thought: opinions are paid for by the rich

Using the statement for inspiration, **create** an article expressing your point of view on the spread of news on social media. In your answer you must:

- synthesize mathematics and language and literature to explain how news spreads on social media
- explain your point of view about the spread of news on social media using both mathematics and language and literature
- use relevant information from the pre-release material to support your answer.

(12 marks)

Note: The point of view needs to be explicit.

Note: The structure of the article is not relevant to awarding credit

Marks	Descriptor
0	The student does not achieve a standard described by any of the descriptors given below.
1-3	The student: <ul style="list-style-type: none"> • uses mathematics state how news spreads on social media • uses language and literature to state how news spreads on social media • states their point of view about the spread of news on social media using mathematics or language and literature
4-6	The student <ul style="list-style-type: none"> • outlines how news spreads on social media using mathematics and language and literature • outlines their point of view about the spread of news on social media using both mathematics and language and literature • attempts to use appropriate information from the pre-release material
7-9	The student: <ul style="list-style-type: none"> • describes how news spreads on social media using mathematics and language and literature • describes their point of view about the spread of news on social media using both mathematics and language and literature • uses appropriate information from the pre-release material.
10-12	The student: <ul style="list-style-type: none"> • explains how news spreads on social media using mathematics and language and literature • explains their point of view about the spread of news on social media using both mathematics and language and literature • uses extensive information from the pre-release material.

Reference 3

Video script:

Whenever we check out our favourite bands online, message our friends on social media, or post a selfie, we leave an online trail. This is called our digital footprint.

In fact, nowadays our digital footprint can begin before we even know what a computer is. Every time you give an online platform information, they increase their virtual picture of you.

This means companies and other people, whether we like it or not, know a lot about us.

Have you ever wondered when you're online and the adverts seem to know what you like?

That's your digital footprint catching up with you. Posts, messages, pictures, everything by you or about you, adds to your digital footprint.

Some of these things can be kept by the companies you give them to. But hang on: you can always delete it... right?

Uh, no, not always. People can always screen grab things, and deleted things can still be hanging around somewhere online, and the negatives might come back to bite you.

In the future, like when you meet new people or look for jobs, it's pretty much guaranteed that someone will look you up online, and you've got to think: what will they see?

If you live part of your life online, then your digital footprint becomes part of not only your present but also your future.

You've got to own your footprint because it's with you for life.

Question 3

Throughout this examination you have developed new interdisciplinary understanding that could influence your interaction with the online world. **Demonstrate** this new understanding in an informative speech for younger students on how they can act responsibly online.

In your speech you must:

- discuss what you have learned as a result of this examination about interacting with the online world
- suggest actions for younger students to act responsibly online based on this new understanding
- explain potential positive and negative consequences of these actions
- use relevant information from the pre-release material to support your answer. **(12 marks)**

Marks	Descriptor
0	The student does not achieve a standard described by any of the descriptors given below.
1-3	The student: <ul style="list-style-type: none"> • states what they have learned as a result of this examination about interacting with the online world • states actions for younger students to act responsibly online, attempting to link to their new understanding • states potential positive or negative consequences of these actions •
4-6	The student <ul style="list-style-type: none"> • outlines what they have learned as a result of this examination about interacting with the online world • outlines actions for younger students to act responsibly online partially linked to their new understanding • outlines potential positive or negative consequences of these actions • attempts to use relevant information from the pre-release material to support their answer.
7-9	The student: <ul style="list-style-type: none"> • describes what they have learned as a result of this examination about interacting with the online world • describes actions for younger students to act responsibly online directly link to their new understanding • describes potential positive and negative consequences of these actions • uses relevant information from the pre-release material to support their answer.
10-12	The student: <ul style="list-style-type: none"> • explains what they have learned as a result of this examination about interacting with the online world • explains actions for younger students to act responsibly online directly linked to their new understanding • explains potential positive and negative consequences of these actions • uses extensive information from the pre-release material to support their answer.