



20TH CENTURY HEADLINES
REWRITTEN TO GET MORE CLICKS

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| HOW A SHOCKING NEW THEORY, DISCOVERED BY A DAD, PROVES SCIENTISTS ARE WRONG ABOUT <i>EVERYTHING!</i> | 1905 | |
| 17 THINGS THAT WILL BE OUTLAWED NOW THAT WOMEN CAN VOTE. | 1920 | |
| MOST EMBARRASSING REACTIONS TO THE STOCK MARKET CRASH [GIFS] | 1928 1929 | THIS ONE WEIRD MOLD KILLS ALL GERMS |
| 5 INSANE PLANS FOR FEEDING WEST BERLIN YOU WON'T BELIEVE ARE REAL | 1945 1948 | THESE 9 NAZI ATROCITIES WILL MAKE YOU LOSE FAITH IN HUMANITY |
| 12 NIP SLIPS POTENTIALLY VISIBLE TO SATURN | 1955 1957 | AVOID POLIO WITH THIS ONE WEIRD TRICK |
| THIS IS THE MOST IMPORTANT PHOTO OF AN ASTRONAUT YOU'LL SEE ALL DAY | 1968 1969 | THIS YEAR'S ASSASSINATIONS RANKED FROM MOST TO LEAST TRAGIC |
| YOU WON'T <i>BELIEVE</i> WHAT THESE PEOPLE DID TO THE BERLIN WALL! [VIDEO] | 1986 1989 | THIS VIDEO OF A TERMINALLY ILL CHILD WATCHING THE <i>CHALLENGER</i> LAUNCH WILL BREAK YOUR HEART |
| | JAN 1, 1990 | 500 SIGNS YOU'RE A 90s KID |

Confirmation Bias

- We are naturally predisposed to pay more attention those things that support our existing beliefs and dismiss contrary evidence
- This can lead us to false inductive inferences by skewing what information we weigh more heavily in our decision-making

How We Believe

- Personal experience and reflection inform our beliefs, but much comes from external sources
 - News, online, what people tell us
- But those who give us information are all prone to the same biases we are
- We can be easily fooled by others, either inadvertently or purposefully

Motivated Reasoning

- The foundation that underlies our use of confirmation biases
- We develop background rationalizations to justify holding our beliefs
- This occurs even in the face of strong contrary evidence and argument

The Backfire Effect

- When we present evidence that contradicts what someone else believes, that person is more likely to dig in and resist correction than to accept that they were wrong
- Instead of facts serving to undermine false beliefs, they can serve to reinforce those errors

The Backfire Effect

- Countering this is possible, but not easy
- May be done through providing persistent, consistent correction
- Providing explanations, not reasons, may also be useful in correcting beliefs

Filter Bubbles

- Personalized news services and internet searches tend to provide what you want to hear, not a neutral or opposing point of view
- Problematic because this only serves to reinforce one's confirmation biases
- Especially prominent on social media

Filter Bubbles

- To help pop the bubble, you must counter your instincts and seek information that may counter what you believe
- As with the scientific method, disconfirmation is key to being able to be truly informed
- Simply knowing answers exist is much less useful than knowing what the actual answers are

Moral Panics & Health

- Most people regard their personal health as highly important
- As such, this can lead us to paying more attention to hyperbole and misleading information if it promises to improve health
- Dietary issues are a great example of this

Dietary Hyperbole

- Scientific findings have a built-in degree of uncertainty
- But uncertainty doesn't sell well and tends to be less compelling to the public
- People want simple answers and miracle cures



Dietary Hyperbole

- Being right means embracing the possibility that you might be wrong
- When faced with "amazing" or "miracle" bestselling diets that promise quick change, it's important to *think* about the message
- For example: Is sugar addictive?

Is Sugar Addictive?

- Several recent films and books have made this claim
- "...more powerfully addictive than alcohol, cocaine or even heroin."



(Hyman, 2014)

Is Sugar Addictive?

- It depends at least partially on how you define “addiction” and “addictive”
- Someone can be “addicted” *to* something, but is that the same as something *being* “addictive”?

Addiction

- Jane is addicted to heroin
- Sally is addicted to playing Minecraft
- Is this the same type of addiction or not?



Types of Addiction

- Activities that we like are highly rewarding at the brain level, resulting in dopamine release
 - So, one might get “addicted” to Minecraft because of how much fun they have playing
- But *things* that are “addictive” tend to be something that almost all people would find rewarding and want to keep doing

So, Is Sugar Addictive?

- Maybe in the sense of being consumed by some people to the problematic level, but not really in the sense that nicotine or heroin is
- People can (and are) certainly eating too much sugar, but it probably isn't an addiction in a clinical sense

Sensationalistic Press

- One of the other reasons people have misconstrued ideas about things like "sugar addiction" is that sensationalism sells
- This can lead to press releases and reporting on scientific findings that is exaggerated
- "[Chocolate causes weight loss!](#)"

Exaggerations & Press Releases

- Recent study found that over 1/3 of university-written press releases contained advice or claims that were exaggerated
- The news articles about those studies were overwhelmingly exaggerated as well
- It's not just the media's fault!

Conclusions

- To be a good critical thinker, we shouldn't be invested in the conclusions, but in how we got to those conclusions
- Carefully examining what you are being told and how it is being presented is crucial to not being fooled by your world

Media Critique #2


