

Sci-Comm in Sun Care

Why and How?

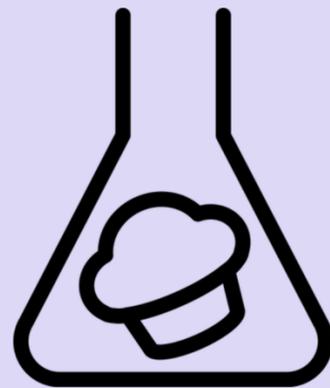
Dr Michelle Wong
Lab Muffin Beauty Science
7 May 2023



About Me

Dr Michelle Wong

B Sc Adv (H1M), PhD (Chem), Dip Form Chem,
Science Education



labmuffin.com

Website, established 2011
2 million visits per year

[@labmuffinbeautyscience](https://www.instagram.com/labmuffinbeautyscience)

Instagram page, established 2014
432,000 followers

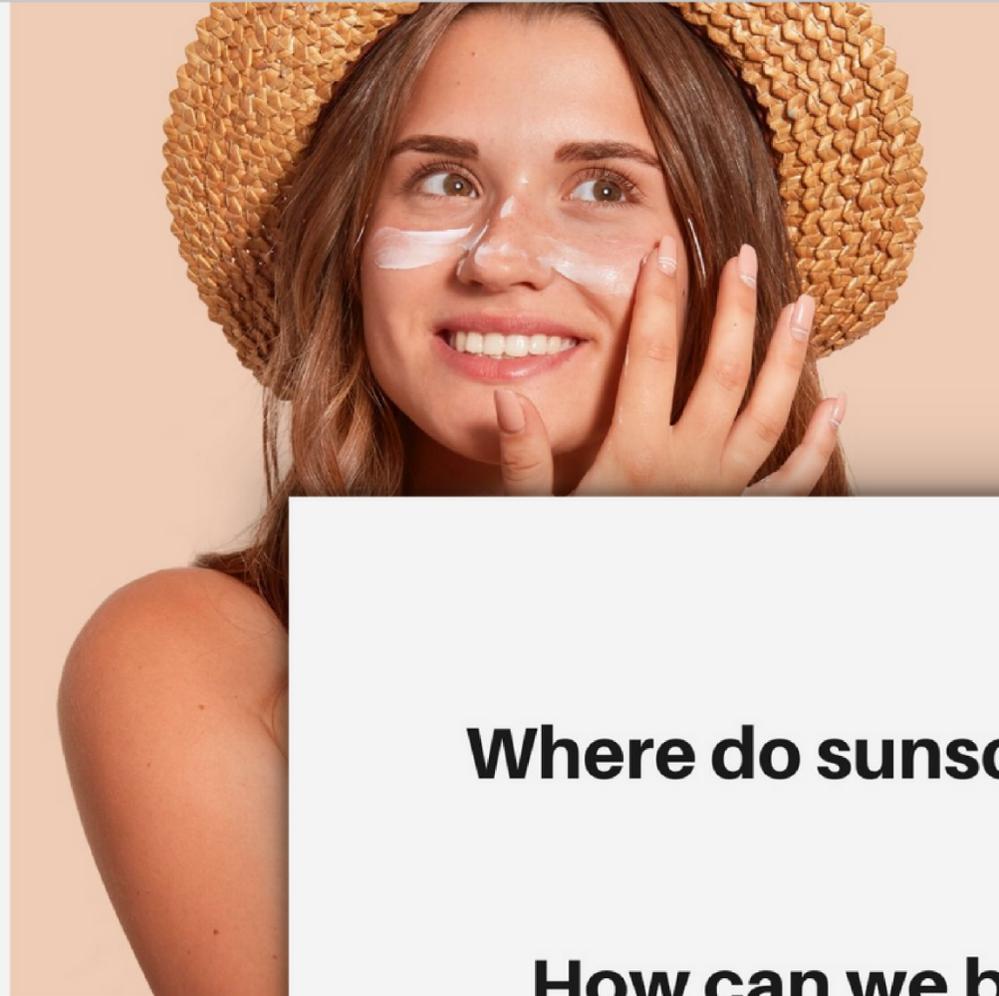
[Lab Muffin Beauty Science](https://www.youtube.com/channel/UC...)

YouTube channel, established 2017
404,000 subscribers

Sunscreen Mythbusting

Reflections from the
social media frontline

Dr Michelle Wong
Lab Muffin Beauty Science
15 May 2022



Where do sunscreen myths come from?

How can we bust myths effectively?

Why should we care?

The New York Times

TikTok Is Flooded With Health Myths. These Creators Are Pushing Back.

Meet the medical experts fighting bogus science, one “stitch” at a time.



Google News Initiative

Trusted Media Summit APAC 2022

Influencer Tips for Debunking Misinformation

How to give your fact-based information a fighting chance on social media against algorithm-friendly misinformation.



Michelle Wong
Content Creator
Lab Muffin Beauty Science

Why should we communicate science?

Why isn't there more good science content?

How can we increase it?

Do consumers need to know?

1930s

Ask your Doctor
Not only are the creamy emollients of Wright's Coal Tar Soap specially suited for cleansing the most delicate complexion, but your doctor will tell you that the antiseptic constituents of this excellent soap protect against infection and disease.

For 70 years — doctors themselves have been using Wright's Coal Tar Soap and recommending it for family use.



WRIGHT'S COAL TAR SOAP

10 1/2 d. per cake, all Chemists and Stores

1950s

Another Ponds' Bride-to-be

MARION LYNN, exquisite daughter of Mr. and Mrs. Claude E. Lynn of the prominent Chicago family. Her engagement to Bertrand L. Moore, Jr., of Louisville, Kentucky, was announced New Year's Day, 1951.

HER RING is a beautiful brilliant-cut 100-white solitaire, set fairly high, and on each side a single round diamond set a little lower. The band is platinum.



She's ENGAGED! She's Lovely! She uses Ponds!

See how Marion Lynn's SOFT-SMOOTH Glamour Care will help your skin.

Marion says, "I think Ponds' Cold Cream is splendid for skin that's thin and sensitive like mine. Even a little cold or wind or sun will rough my face right up.

"That's why I like Ponds' so much. It's so light, so soft and soothing itself—and softens and cleans my skin beautifully.

"I always use it twice each time, like this:

"First, I slather Ponds' thick over my face and throat and pat with back little joints. I pat up from my chin, over my cheeks and nose and forehead. This helps to soften and take off dirt and make-up. Then, I tissue it all off.

"Then, I rinse with a second creaming of lots more soft, silky Ponds' Cold Cream. Tissue it off again. This twice-over leaves my skin so clean and fresh feeling—shining clean. I call it—every little smidge of soil comes right off."

Try Ponds' Glamour Care yourself—Marion's way—you'll love it, too.

Use Ponds' Gold Cream every night—and for daytime clean-ups. See how it helps your skin have that lovely fresh-as-a-flower look. You'll see, too, why so many more women and girls use Ponds' than any other face cream at any price.

Buy a jar of Ponds' Gold Cream today—at any beauty counter. Even popular priced stores. The most recommended—the lovely big jars.

Ponds' Girls Belong to Cupid

Hurry today to your favorite beauty counter for Ponds' soft-smooth Cold Cream—the glamorous face cream used by so many lovely engaged girls and by leading society beauties like Mrs. Elliott Roosevelt and Mrs. Vanderbilt Phelps.

And Ponds' makes for you four other famous beauty aids . . .

Ponds' *Fantastic Cream* for the new 1-Minute Mask, and for a flattering powder base.

Ponds' lovely *Dry Skin Cream*, a new extra-rich cream.

Ponds' new *Dreamflower Face Powder* (6 new Dreamflower shades) in an adorable new Dreamflower box.

And—Ponds' "LIPS" that stay on longer! (5 Staggering shades).



1980s

THE SUMMER OF '86



Coppertone will help you tan this summer like never before. Because now Coppertone Lotion contains Vitamin E and aloe to nourish your skin while you tan. And it even works while you swim because all the new Coppertone Lotions are waterproof. This summer no matter what your skin type or preference, there's a Coppertone for you. From SPF2 to SPF15. Coppertone Lotion will help keep your skin tan and beautiful. All through the summer of '86.

MOISTURIZING SUNTAN LOTION

NOW WITH VITAMIN E AND ALOE

Coppertone®

The All-New Coppertone Line.



New! Waterproof formula!

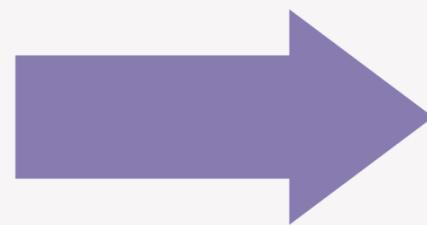
**Analog, early digital media
(1430-2004)**

One-way communication

High barrier to entry

Consistent messaging

Good general reach prioritised



**Connected media
(2004 onwards)**

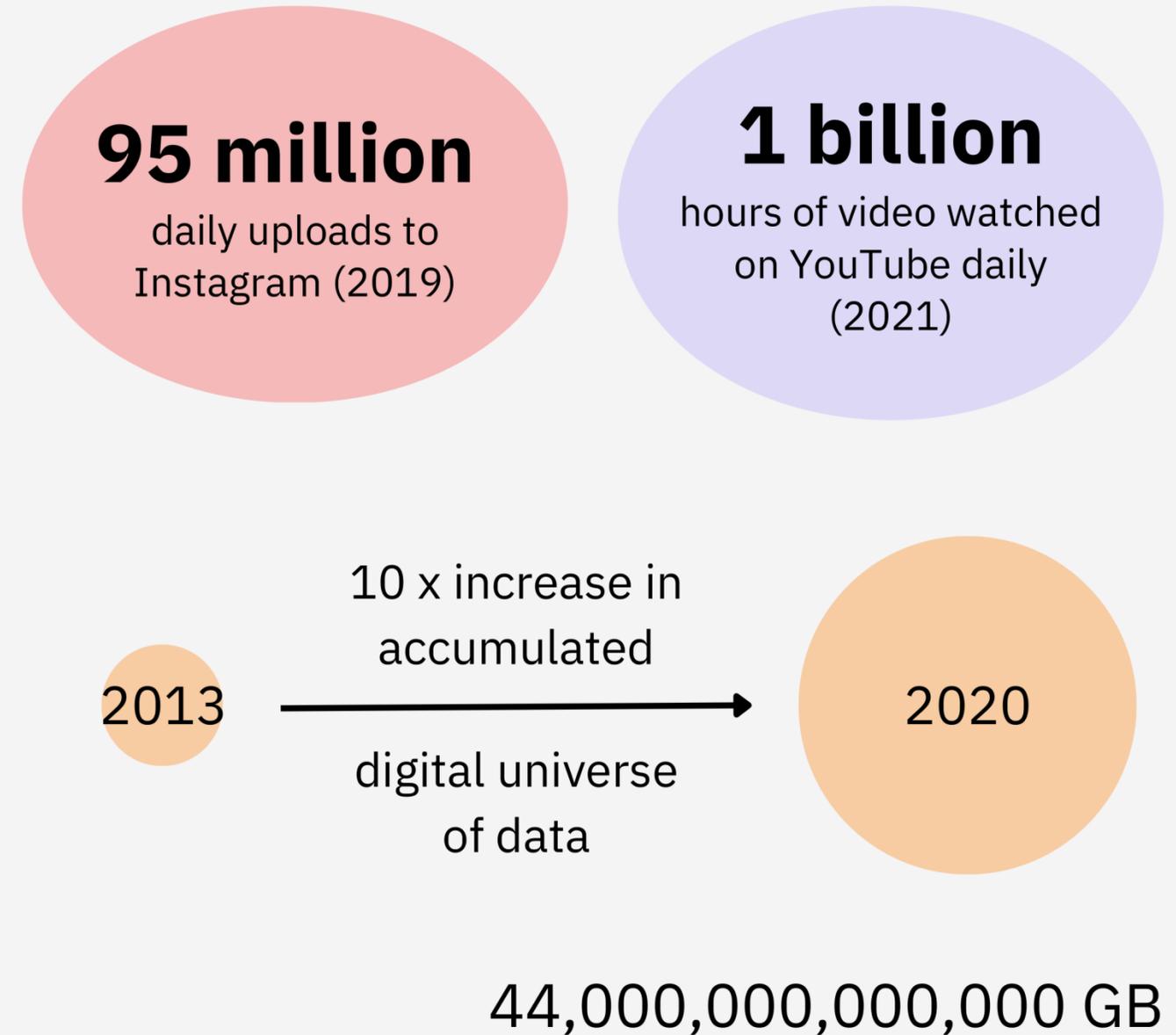
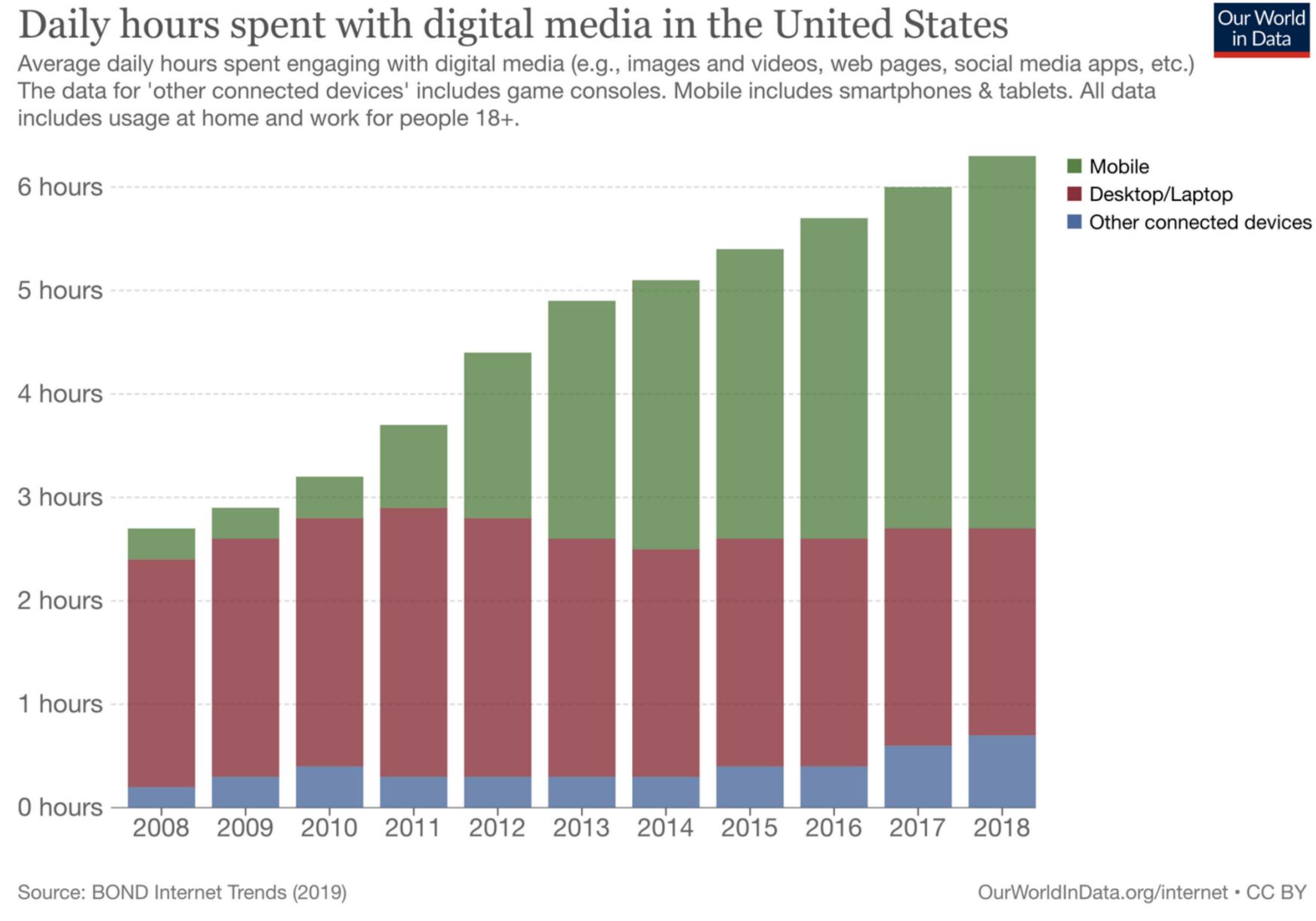
Two-way communication

Very low barrier to entry

Diverse messaging

Targeted by algorithms

Explosion of information



Do consumers need to know?

1980s

THE SUMMER OF '86

MOISTURIZING SUNTAN LOTION

NOW WITH VITAMIN E AND AL

Coppertone

The All-New Coppertone Line.

New! Waterproof formula!

8.5 billion

Google searches a day
(2022)

If scientists don't tell them,
someone else will

Torrent of misinformation



social media

NGOs

influencers

traditional media

websites

mobile apps

documentaries

clickbait articles

predatory journals

fake experts

dishonest marketing

Strength in numbers

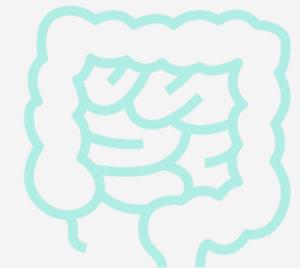
Illusory Truth Effect

People tend to believe information with repeated exposure, even if they know it's false

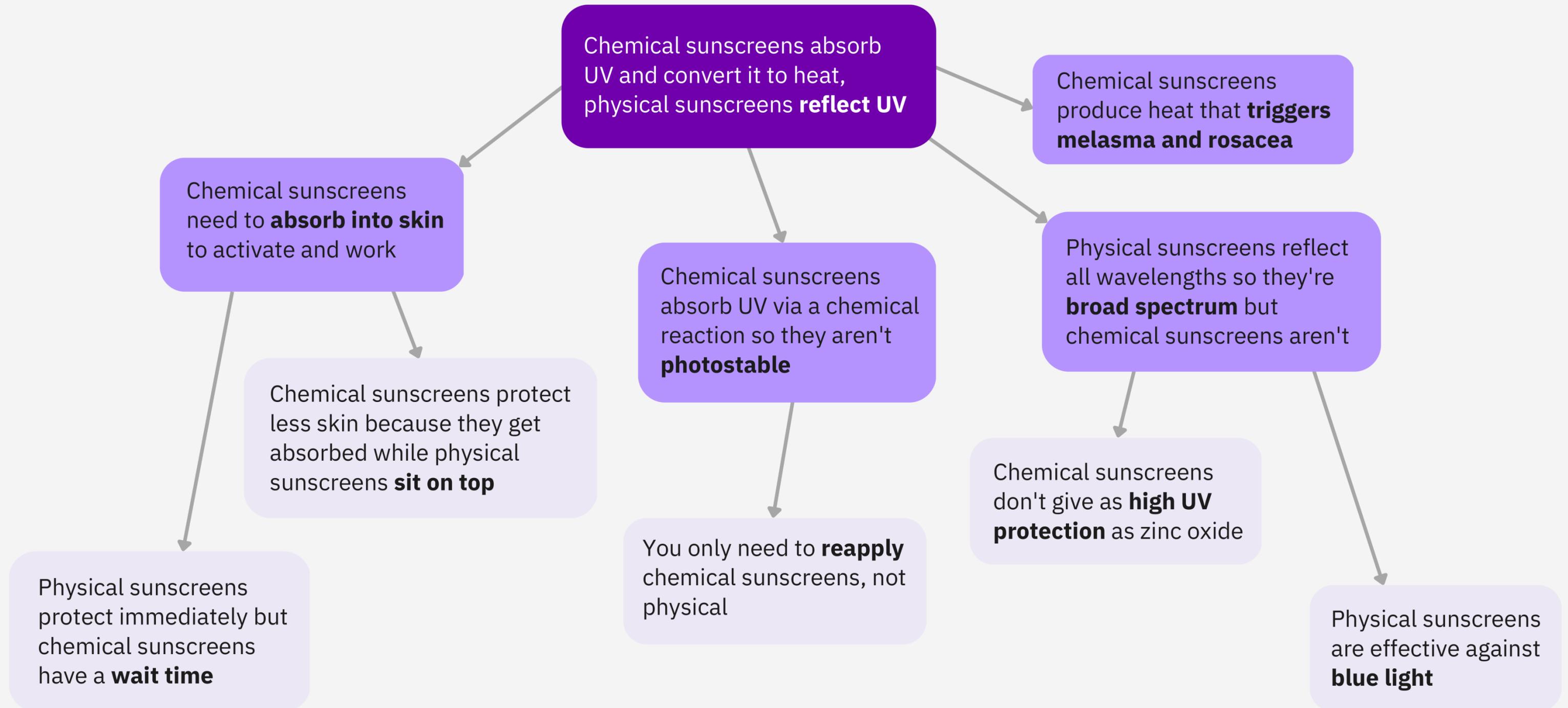


"This aligns with what I know"

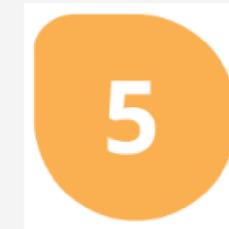
Things that feel familiar feel more true
(processing fluency)



Misinformation multiplies



Pseudoscientific systems



"The most worrisome sunscreen active ingredient is oxybenzone"



“The methodology used to create the “Dirty Dozen” list does not appear to follow any established scientific procedures.”

Winter CK, Katz JM (2011). *J Toxicol.* **2011**:589674.

Consumers impact industry



Regrettable substitution

MI replacing parabens

Misinformed brands

"Preservative-free"

Less ingredients available

Everything is toxic at some point

Consumers impact industry

Hawaii is banning sunscreens that kill coral reefs

Common sunscreen chemicals oxybenzone and octinoxate have been found to increase coral bleaching.

Check your suitcase: Maui County bans non-mineral sunscreen to protect coral reefs

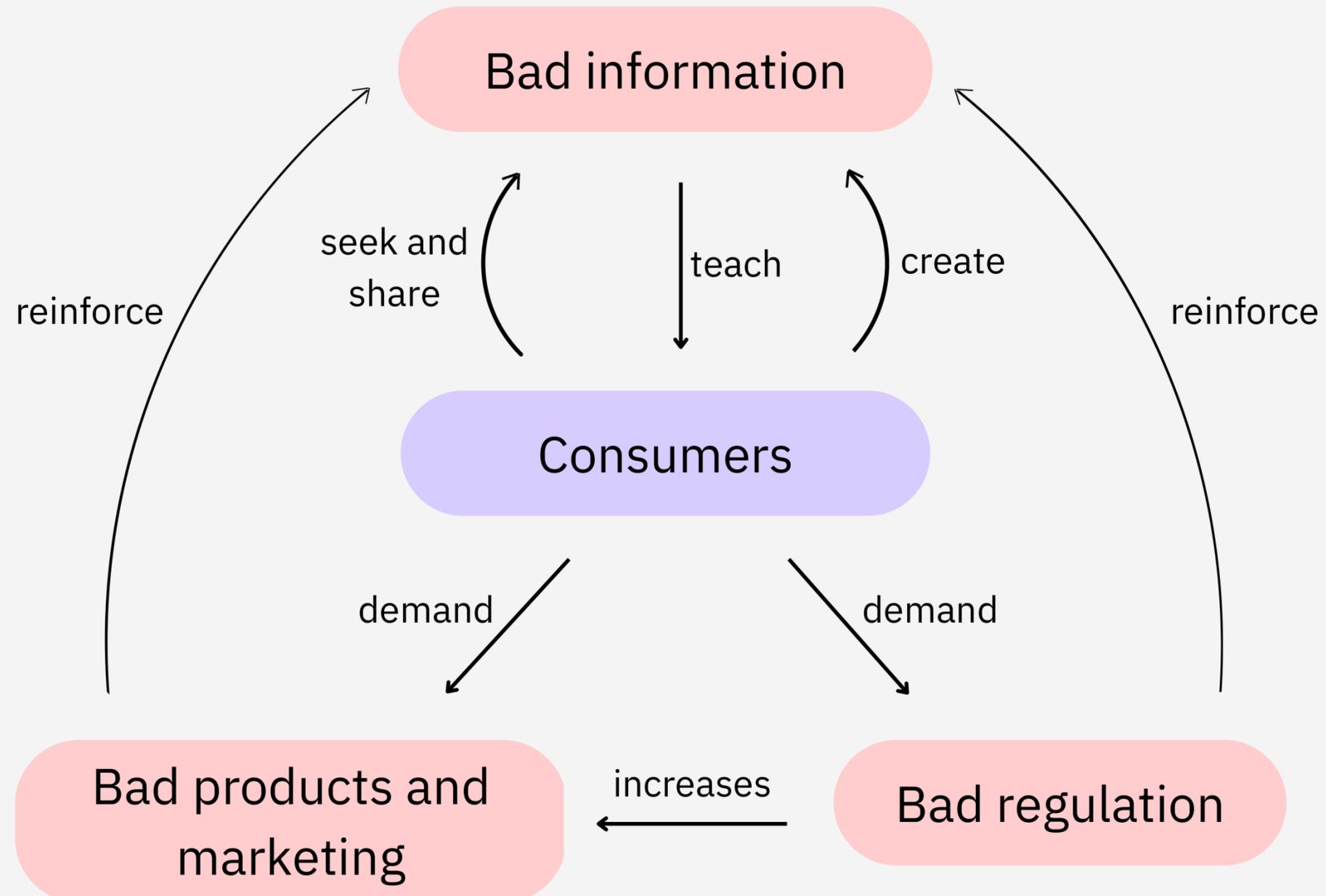


Broad Spectrum Protection, Cruelty Free, Vegan, Paraben Free, Gluten Free, Water Resistant (80 Minutes) **Hawaii Act 104 Reef Compliant**

Made Without: Oxybenzone, Octinoxate, Parabens, Synthetic Fragrance



Information feedback loop



Where's the good information?

Accurate content takes time

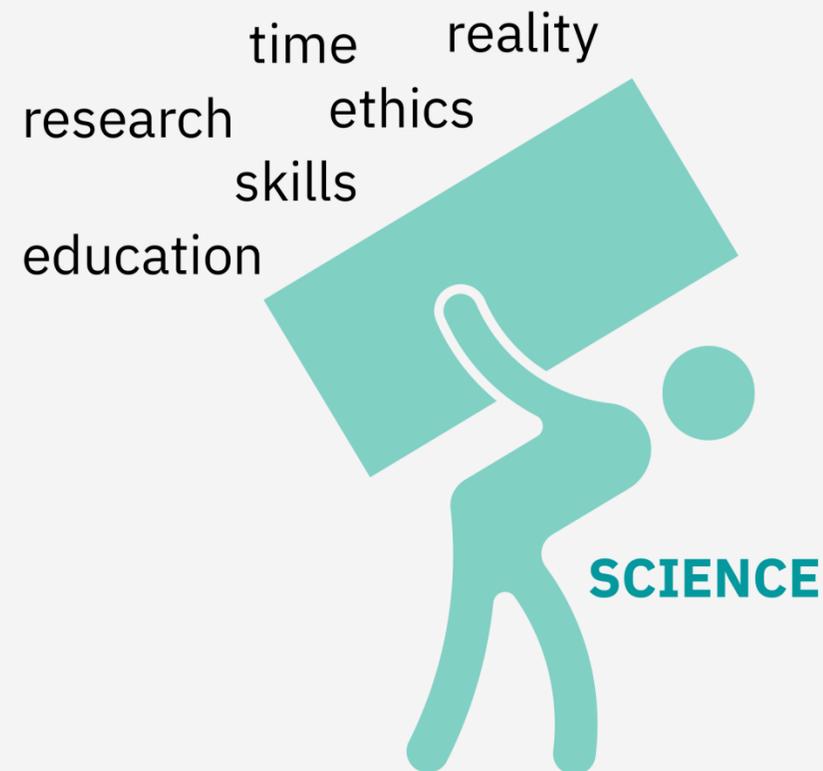
Brandolini's law

"The amount of energy needed to refute BS is an order of magnitude bigger than that needed to produce it."

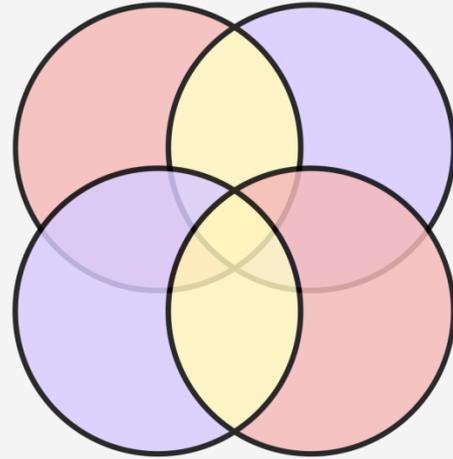


Misinformation is appealing

Engagement → Reach



Less beauty science creators



Limited pool of creators

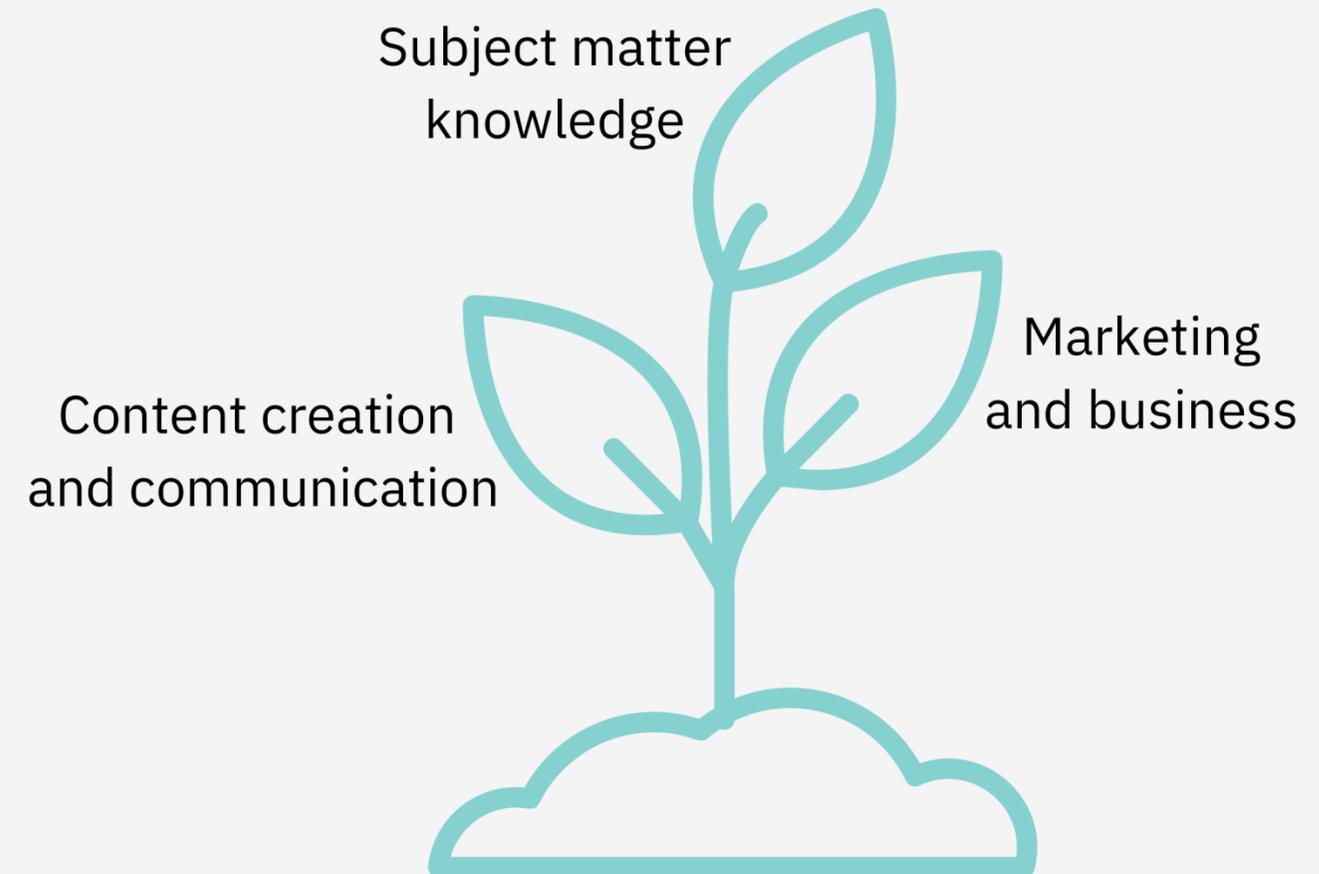
"Real job" = limited time

Doesn't help career advancement

Company social media policies

Perceived conflicts of interest

Takes time to develop skills

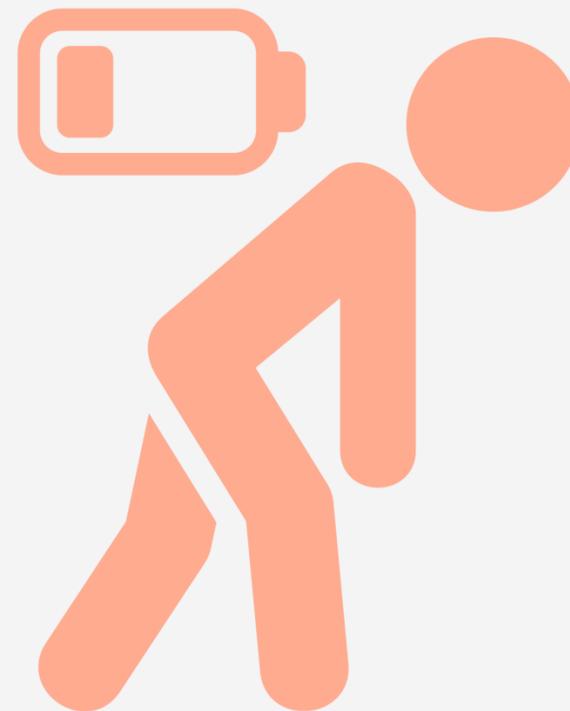


Attrition rates are high

Hate comments



Lack of recognition



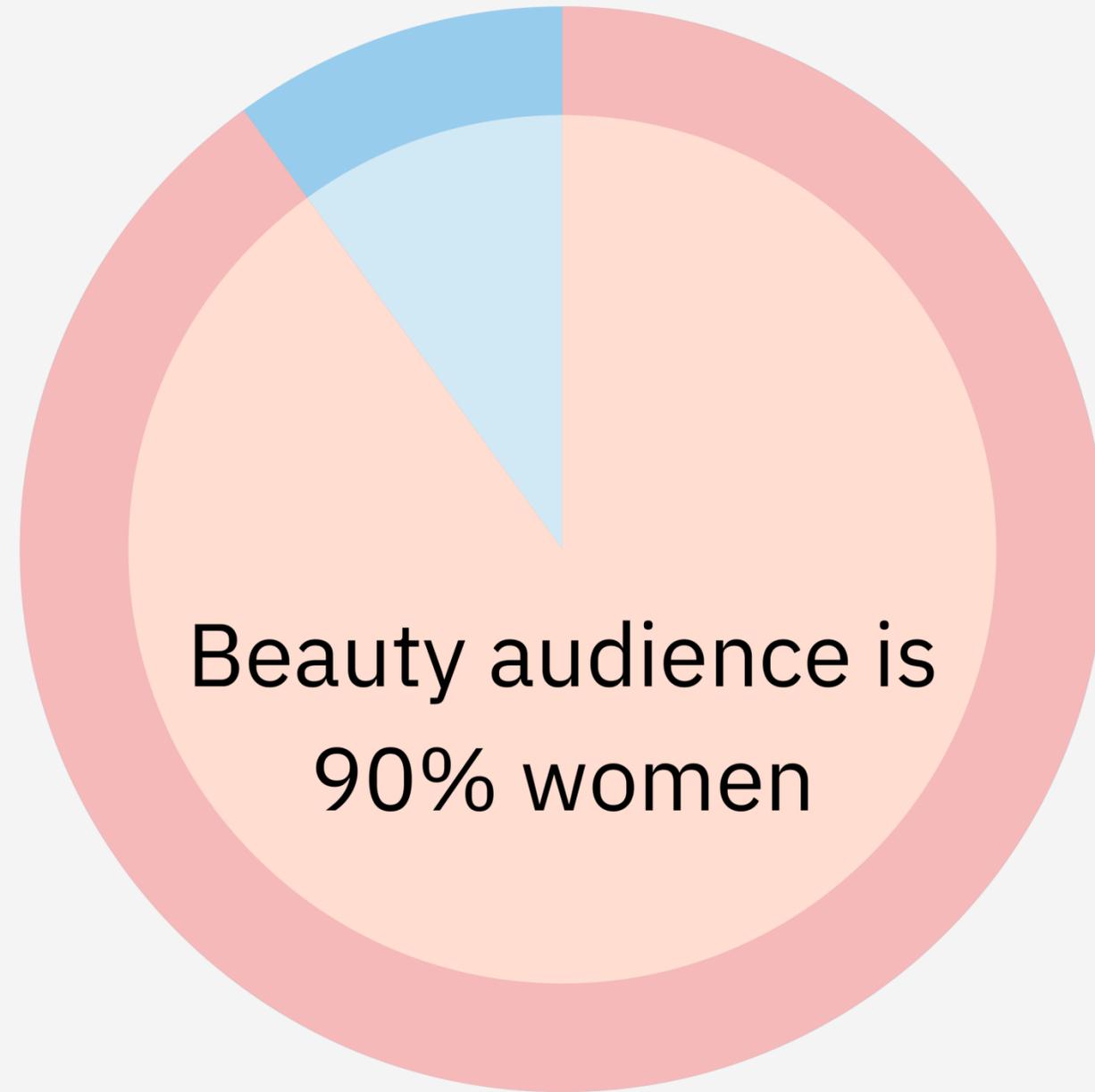
No career payoffs

Plagiarism

High workload

Less algorithmic
boost

Specific challenges



Gender representation?

Top 150 Science & Tech YouTube Channels

6 hosted by women

2 female voiceover

Rank	Channel Name	Subscribers	Videos
1	Veritasium	1.5M	100
2	MinutePhysics	1.2M	150
3	SmarterEveryDay	1.1M	120
4	RealLifeLore	1.0M	110
5	SciShow	900K	130
6	RealLifeLore	850K	100
7	SciShow	800K	120
8	RealLifeLore	750K	110
9	SciShow	700K	100
10	RealLifeLore	650K	110
11	SciShow	600K	100
12	RealLifeLore	550K	110
13	SciShow	500K	100
14	RealLifeLore	450K	110
15	SciShow	400K	100
16	RealLifeLore	350K	110
17	SciShow	300K	100
18	RealLifeLore	250K	110
19	SciShow	200K	100
20	RealLifeLore	150K	110
21	SciShow	100K	100
22	RealLifeLore	50K	110
23	SciShow	40K	100
24	RealLifeLore	30K	110
25	SciShow	20K	100
26	RealLifeLore	15K	110
27	SciShow	10K	100
28	RealLifeLore	5K	110
29	SciShow	2K	100
30	RealLifeLore	1K	110
31	SciShow	1K	100
32	RealLifeLore	1K	110
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140	RealLifeLore	1K	110
141	SciShow	1K	100
142	RealLifeLore	1K	110
143	SciShow	1K	100
144	RealLifeLore	1K	110
145	SciShow	1K	100
146	RealLifeLore	1K	110
147	SciShow	1K	100
148	RealLifeLore	1K	110
149	SciShow	1K	100
150	RealLifeLore	1K	110

hypeauditor.com, 2 March 2023

Gender of hosts in popular science
YouTube videos

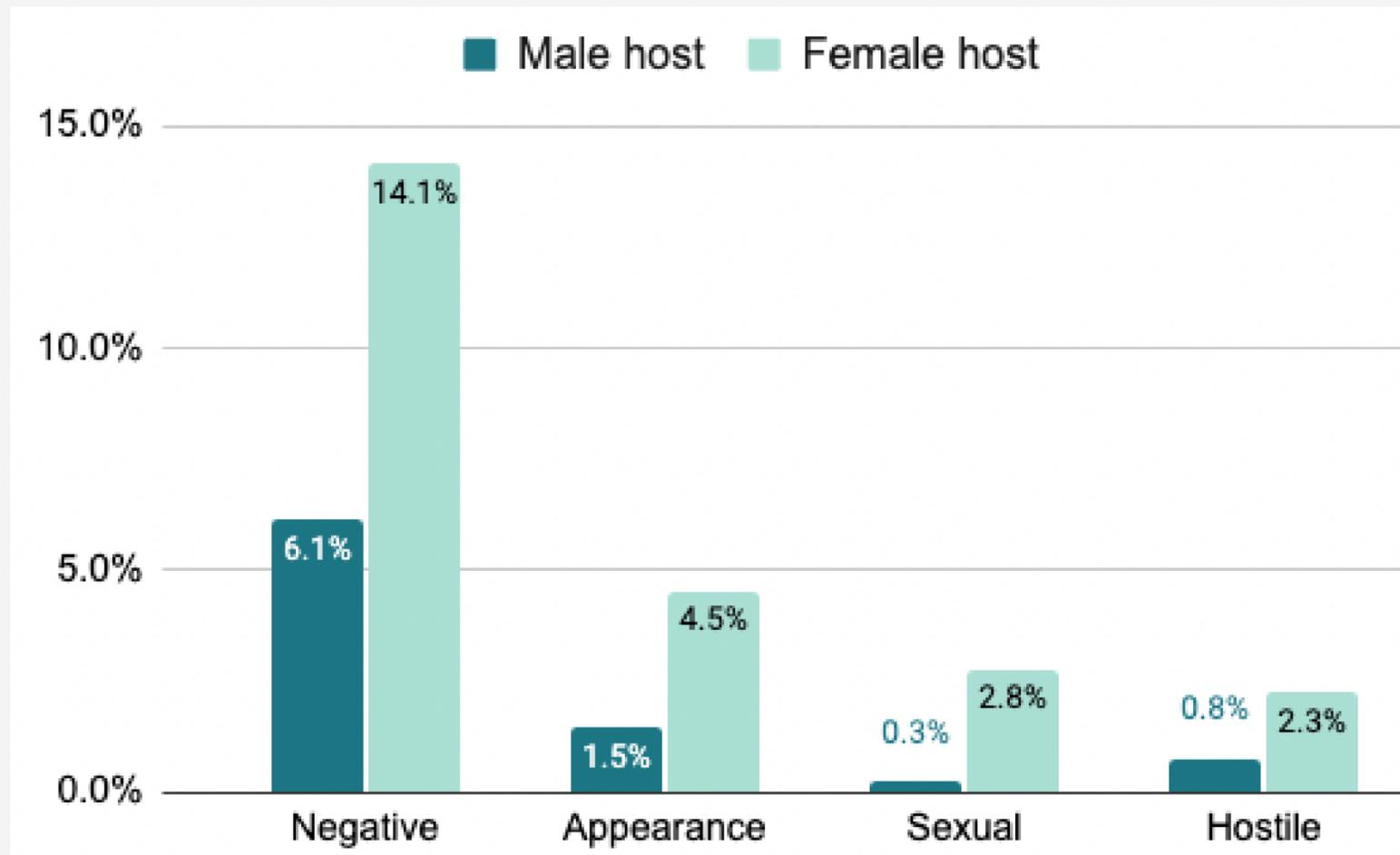
Proportion



Welbourne, D. J., & Grant, W. J. (2016). Science communication on YouTube: Factors that affect channel and video popularity. *Public Understanding of Science*, 25(6), 706–718.

Gender biases in scicomm

23000 science YouTube video comments



Amarasekara I & Grant WJ, Exploring the YouTube science communication gender gap: A sentiment analysis, *Public Understanding of Science*, 2019, 28(1), 68–84.

A TikToker with science Ph.D. begged viewers to stop asking a man to 'explain' things she's already explained





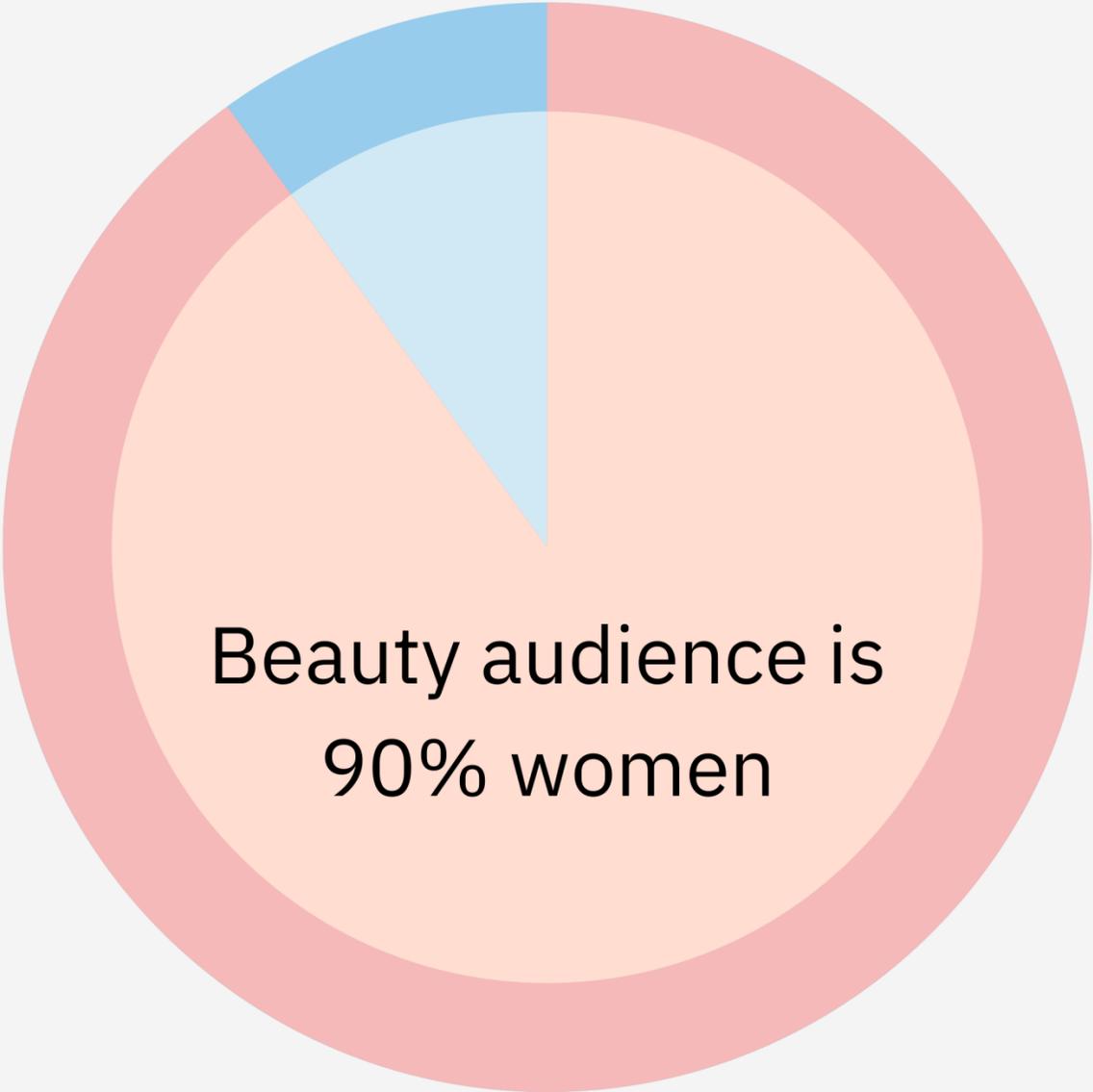
"Where My Ladies At?"
Emily Graslie (The Brain Scoop)
28 Nov 2013

"...in general, women don't have enough time to [make science videos] because of the pressure that every episode has to be flawless in execution."

"There's a pressure to be the whole package. Not only do you have to be intelligent and articulate, but you also have to be attractive."



Specific opportunities



Female hosted channels get more engagement

Women are usually less biased against women

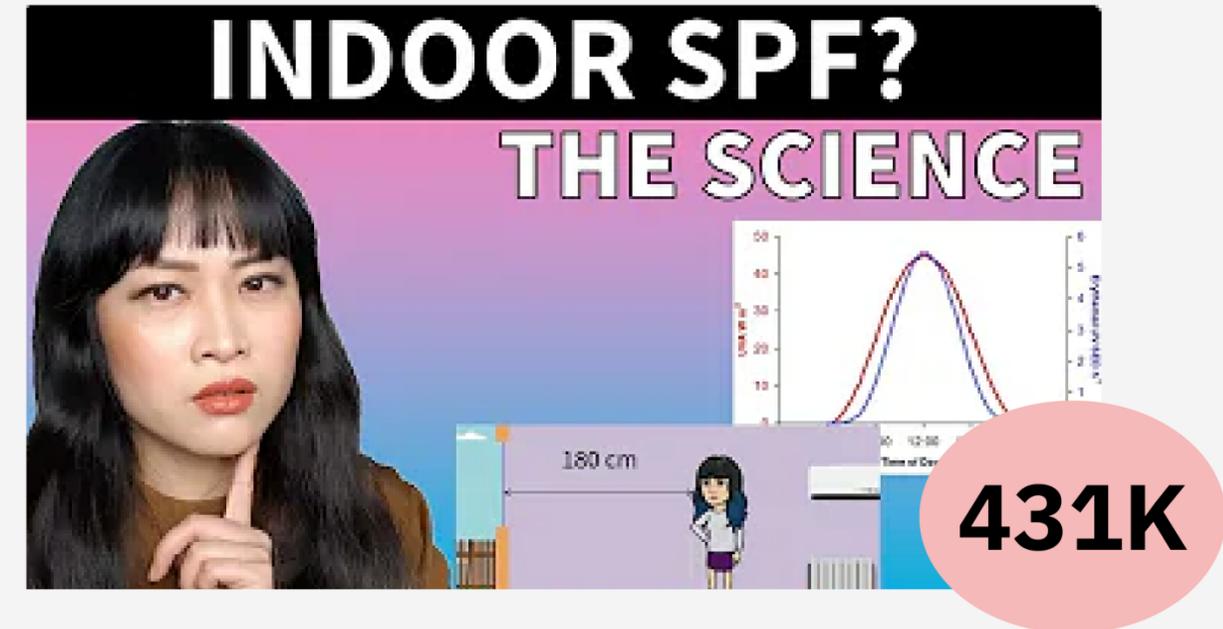
Women leave less toxic comments

Specific opportunities

Reason to watch science videos

	M	F
Information	53%	74%
Entertainment	38%	19%

Landrum AR (2021) Are Women a Missing Audience for Science on YouTube? An Exploratory Study. Front. Commun. 6:610920.



Specific opportunities

"Hyaluronic"



"Niacinamide"

How brands can boost scicomm

Brand marketing

- Incorporate in marketing content
- Share data and explain how product works
- Hire science communicators
- Harder to debunk misinformation

Creator partnerships

- Work with scicommers
- They create content for their platform
- Established reputation
- "Sponsored" disclosure

Beauty SciComm Group

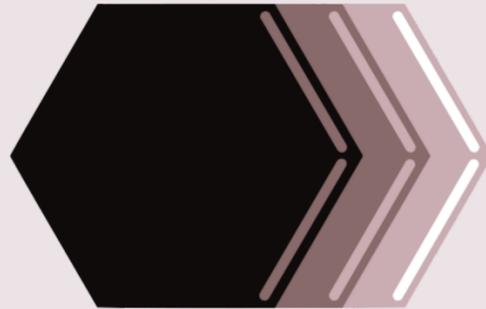


Mission

To increase the quality, volume and reach of beauty science content.

Initiatives

Beauty SciComm Group



beautyscicomm.com



[beautyscicomm](https://www.instagram.com/beautyscicomm)



[Beauty SciComm Group](#)

SciComm Programs

Training and mentoring programs to upskill beauty science content creators

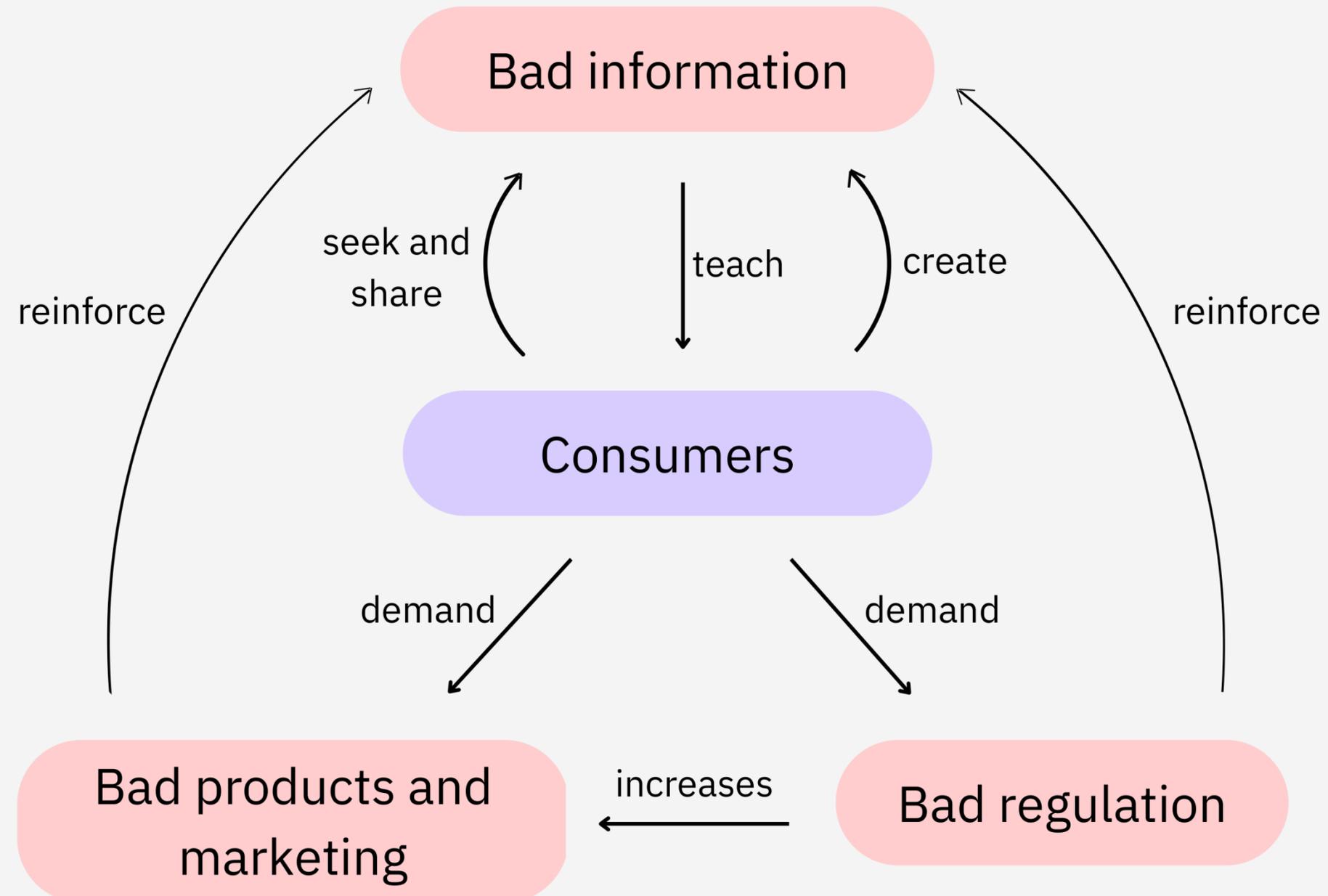
Beauty Science Resources

A central repository of accurate, easily digestible cosmetic science

Media Centre

Rapid-response centre to give accurate information about beauty news stories

Information feedback loop



Information feedback loop

