



# Mind the gap:

Tracking the five generations to understand implicit attitudes.





# ABOUT SENTIENT

## Our Purpose

Sentient is on a mission to increase empathy for the human condition.

At the center of Sentient Decision Science's purpose is a commitment to increase empathy for the human condition. The "human condition" includes all of the characteristics and events that represent key moments of living including birth, growth, emotion, aspiration, conflict, and eventually mortality—that are captured in generational studies. A [recent article in The New Yorker](#) says that generational change is the cause of social and historical change. New generations bring to the world new ways of thinking and doing

and weed out beliefs and practices that have grown obsolete. This keeps society rejuvenated. Generations are the pulse of history. Other writers thought that generations were different from one another because their members carried the imprint of the historical events they lived through. The reason we have generations is that we have change, not the other way around. Regardless of the cause, understanding how generations of people really feel can help drive change through understanding.

## What We Set Out To Achieve

In the recently released PureSpectrum & Sentient Decision Science Implicit Generational Tracker we used Sentient's patented technology Sentient Prime® to test representatives of five generations to understand how they truly feel by measuring their implicit associations. We wanted to provide a new look into the current attitudes of these disparate generations by combining System 1 and System 2 measures to unlock a deeper understanding of the generational mind-set. Specifically examining what these generations self-report and how they feel about work, money, climate change, politics, COVID-19 and their future, we studied the five generally accepted generations active today. Gen Z, Millennials, Gen X and Boomers categorized into Boomers 2 & Boomers 1 due to the large span in age.

### GENERATIONS STUDIED

Generation	Born	Ages
Gen Z	1997 – 2012	9 – 24 (18+ were surveyed)
Millennials	1981 – 1996	25 – 40
Gen X	1965 – 1980	41 – 56
Boomers II	1955 – 1964	57 – 66
Boomers I	1946 – 1954	67 – 75

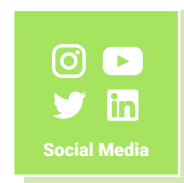
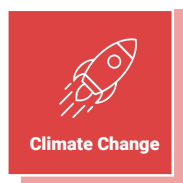
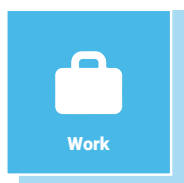
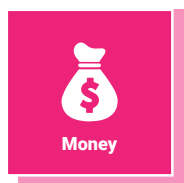
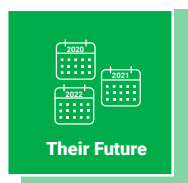
*Beresford Research: Based on widespread consensus as well as new Gen Z analysis by the Pew Research Center, and the one generation defined by the U.S. Census Bureau (Baby Boomers), these are the birth years and ages of the current generations.*

## Study Design

The study period was September 17 - 21, 2021 with 1,750 total respondents, and 350 per group within a representative US general population. We tested implicit emotional appeal and used a seven-point Likert scale measuring attitudes, anxiety, concern, and emotions towards the many once-in-a-generation issues facing us today including work, politics, money, future, climate change, and COVID-19. Our objective was to understand how different generations experienced the last two years on an emotional

level. We didn't want to rely on self-reported data in a survey asking, "how do you feel?" We wanted to understand their implicit emotional response. We also asked explicit questions, and then we measured it all implicitly, using cognition measurement techniques to capture automatic psychological attributes that respondents are unwilling or unable to report.

Let's first cover the technology and the quality of sample needed in this study...







PURESPECTRUM

# ABOUT PURESPECTRUM

## Data Quality is Our Purpose.

PureSpectrum is a rapidly growing insights platform. They simplify technology for researchers so they can gather and use consumer data the way they want. Their goal is to make your life easier. Using their quality-first sampling platform [Marketplace Platform](#), PureSpectrum connects you to a marketplace of diversified panels to deliver a more representative and accurate data set. Each respondent is screened by their industry leading scoring system, [PureScore™](#), supported by dedicated quality analysts and 3rd party deduplication and fraud detection tools.

## Quality: Increasing the Pool of Respondents

### THE MULTISOURCE ADVANTAGE

In addition to providing superior audience and quota delivery, multi-source marketplaces have created channels for previously untapped, differentiated sources. These connections have made PureSpectrum the dependable resource of representative sample for online research studies.



### Representative Sample

Marketplace's network of panels expand the universe of respondents, increasing the representation of your audience in sample.



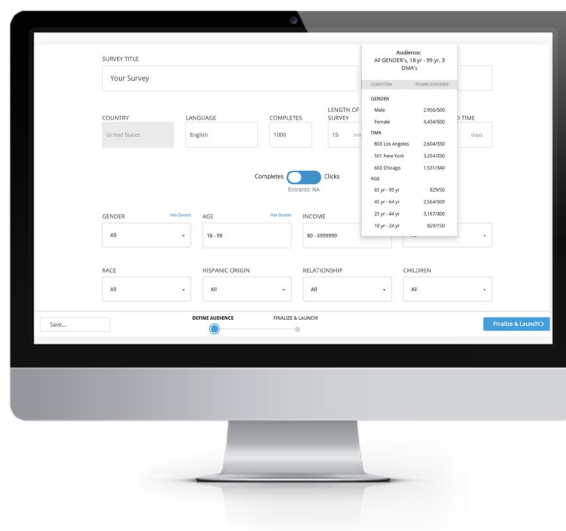
### Supplier Transparency

Tie differences down to the panel level and understand data at a deeper level.



### Decreased Bias

Blending multiple sources of sample reduces inherent bias any single source may carry.



## Quality: Preventing Low Quality Responses

To benefit from pulling from multiple panels, researchers must trust respondents are unique, honest and engaged.



### Device Fingerprinting

Third-party software uses scores of data points to deduplicate respondents across panels and devices to ensure only unique respondents enter your survey.



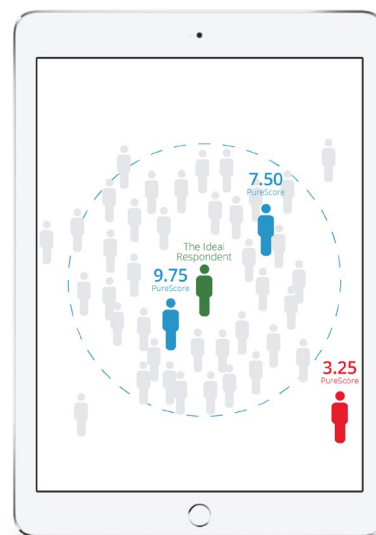
### Fraud Prevention

The same API call for fingerprinting also checks for VPNs, proxy networks, IP addresses from outside the target market and IPs linked to bot networks.



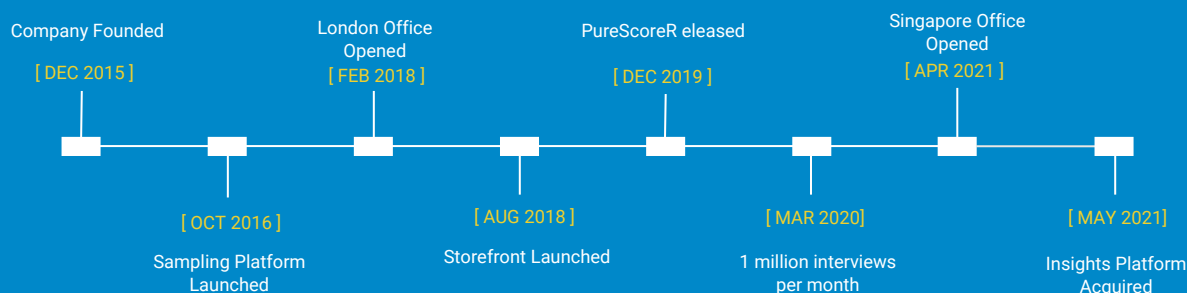
### PureScore™

PureSpectrum's predictive quality rating system built on respondent behavior, device fingerprinting and tens of millions of past sessions improves quality and maximizes feasibility by measuring at the respondent level.



“ Perhaps the most important part is trusting that the respondents who complete each survey are who they say they are. PureScores predictive quality rating system uses over eighteen billion data points a year. The model works by finding patterns among behavior including screening consistency, completion rate, and group behavior based on demography. This is the work that is helping Sentient be confident in understanding the emotion of a generation. ”

## OUR TIMELINE





# ABOUT SENTIENT DECISION SCIENCE'S SENTIENT PRIME®

## How Emotion is Captured in Sentient Prime®

Sentient Decision Science's Sentient Prime® implicit patented research technology is the industry-leading tool for quantifying implicit associations. Providing unprecedented access to the consumer non-conscious on a global scale.

Sentient Prime® embeds scientifically valid implicit experiments within market research surveys to reveal the subconscious associations which influence behavior.

In this study we used "2020" to "the economy", "my company", and "next year". Each of these are what we call "primes". They activate the nonconscious associations in the mind automatically. These associations are repressible and happen without conscious control. And they influence your behavior toward or away whatever that object may be. Intuitively you push away what you do not like and pull toward you what you do. This interface is seen here in an iPhone application.

Participants simply sort those emotions following a prime. So, it's a true implicit exercise and not asking a question, "Hey, tell me how you feel about 2020?" The application is priming you with 2020 and then making you to sort positive and negative emotions. If you're

slower sorting positive emotions, after showing 2020, it means that you have an automatic negative emotional reaction to 2020. Simply measuring what your nonconscious biases are towards these primes. Positive associations are pulled towards you providing a natural approach and avoidance gesture embedded within an implicit association technology. That's how we measure each of these associations. It gives you down to the millisecond response time data on how fast people are making these judgments.

Measures the impact of a momentary exposure of a stimulus – called a prime.

The prime induces an automatic, irrepressible retrieval of associated attitudes and perceptions.

Participants push away associations that are negative.

Positive associations are pulled towards participants.



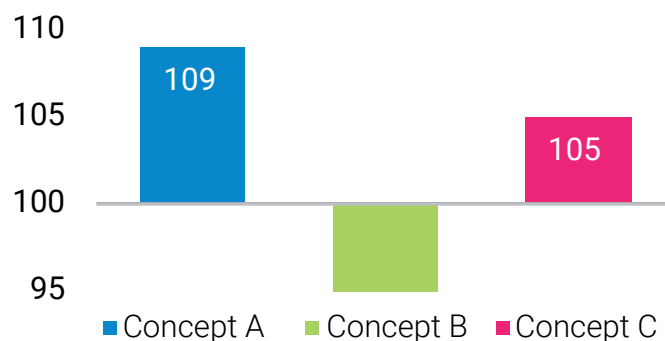


## How Emotion is Measured Using Sentient Prime®

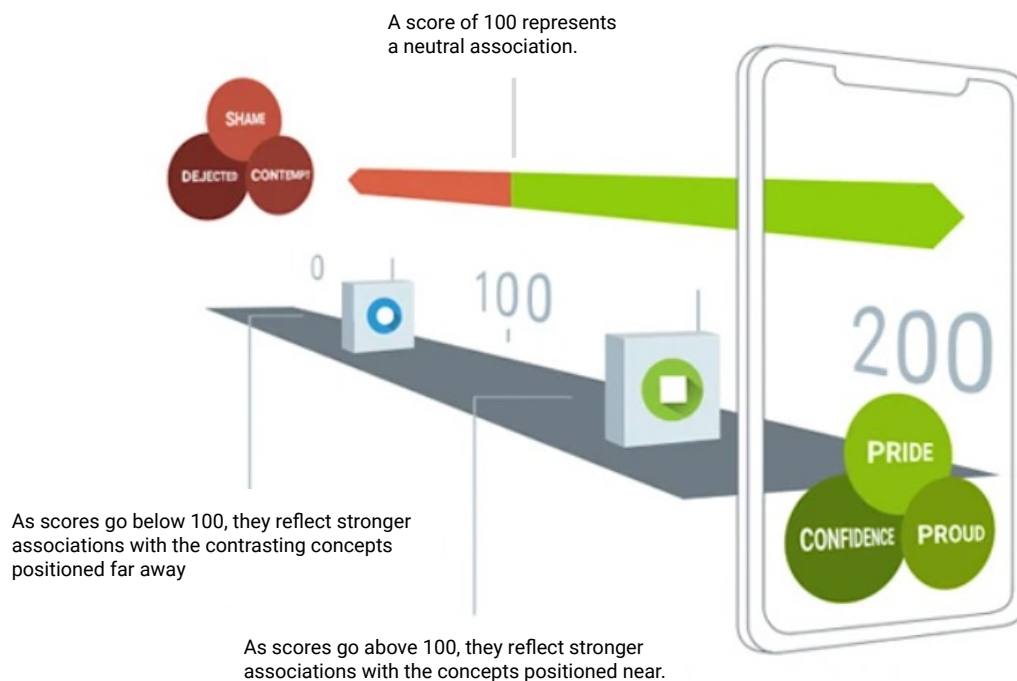
Each prime and association pairing is given a 0-200 index score which reflects the strength of the neural network connection between these two concepts. A hundred is a neutral association. Think of that as like a neither agree nor disagree. Above one hundred is an automatic positive association towards the concept.

Below one hundred is an automatic negative association. When we refer to automatic, we mean, it happens in the minds of humans without their conscious control.

Implicit Emotional Appeal Example

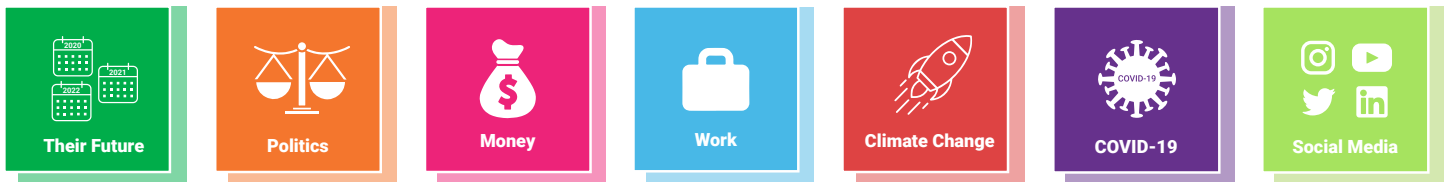


## Measurement Visual



# LET'S REVIEW THE RESULTS

Examining what these generations self report and how they feel about:

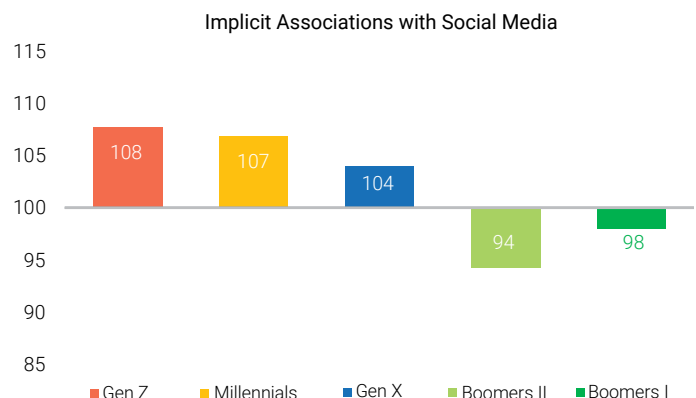


## Boomers have significant anxiety with Social Media.

Sometimes implicit data reveals attitudes that feel intuitively right.

Sometimes, implicit data gives you results that are intuitive. The automatic implicit association for Gen Z and Millennials with social media is significantly positive and high. You would probably get that in a conscious question as well.

Gen X is not quite as positive, but still significantly positive. To interpret this data about two and a half points above one hundred is a significant difference. But what's happening with the Boomers? They're not automatically happy. In fact, they feel automatically negative at the simple exposure of the words "social media". Boomers feel automatically negative after a mere half a second exposure to the phrase. If you have that insight, and you were in social media, would you market to Boomers differently?

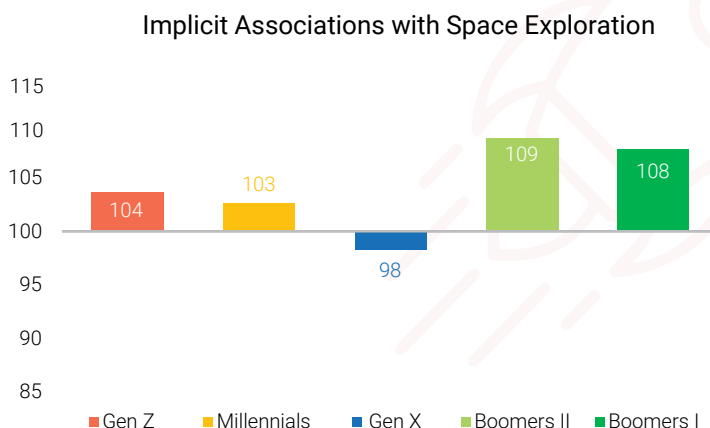




## Space Exploration? Gen X is not impressed.

Generation X has other anxieties on their minds.

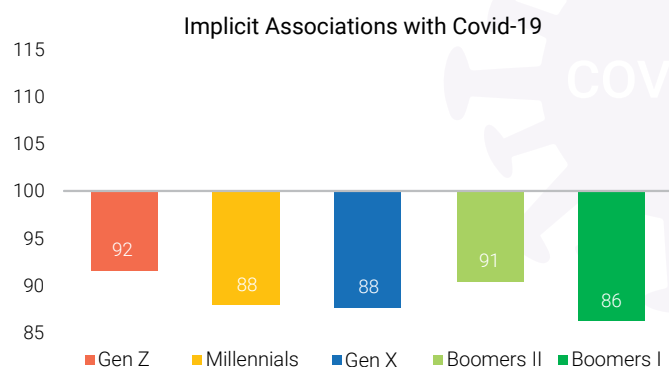
How about space exploration? Boomers appear to love spaces exploration. Why? They're the generation that grew up with the moon landing, right? That moment is forever cemented and etched on their minds. The more emotional the moment, the stronger the association and the longer it lasts. Gen X they are not impressed. Possibly due to anxieties towards the concept. Overall, a negative response from Gen X, Gen Z and Millennials.



## This is to show you that implicit really works...

All generations have strong immediate negative reactions to Covid-19.

So, when we expose COVID-19 what do you think happens? Not surprising it is negative across the board. Everybody hates COVID-19. All generations have a strong immediate negative reaction to COVID-19. To give you a sense of how badly they feel we have added some markers for scale with the implicit associations with Donald Trump in Arizona the weekend before the election in November of 2020. When you show Arizona Republicans a Trump prime in November, we got a 118.9 towards Donald Trump. Independents a 90.1. So, an automatic negative response among Arizona Independents for Trump in November of 2021. Arizona Democrats really didn't like Donald Trump. If you had that data, how would you project the Arizona election would go? It was going to go blue, right? The conscious data doesn't differentiate the result like that. When we test images of snakes we get an 85. A bird song audio primes gets a 120.



### Example of Implicit Associations with the 2020 Election:

*Associations with Trump in AZ November, 2020:*

*Republicans: 118.9  
Independents: 90.1  
Democrats: 68.4*

*Images of snakes: 85.1  
Bird Song (audio primes): 120.3*

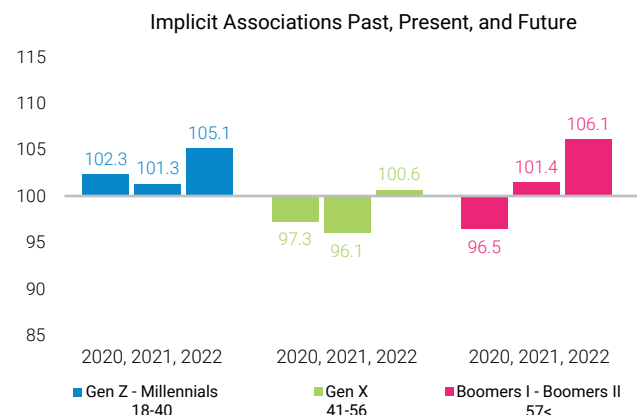
# EMOTIONAL DIFFERENCES BETWEEN GENERATIONS

What are fundamental emotional differences among the five generations living together today?

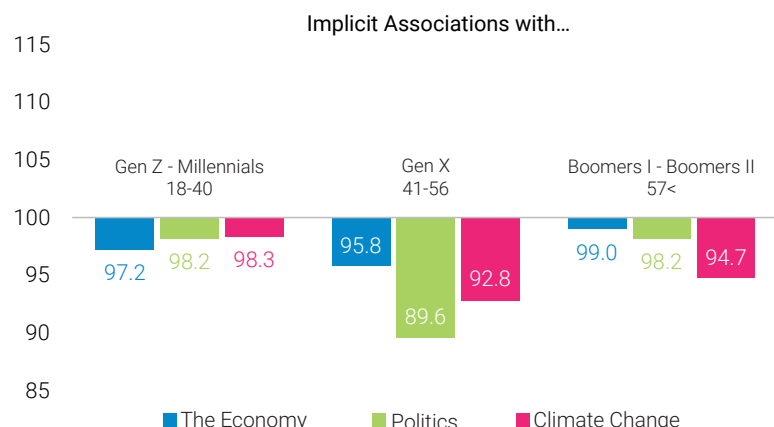
## Gen X is suffering and skeptical of the future.

A pattern emerged of optimism from the younger generations and Boomers.

The implicit associations with the past, present, and future compared across these three years show a distinct pattern. The prime here is 2020, 2021, 2022. Automatically Gen Z, Millennials don't feel that great. Not significantly above a hundred score, but not negative. They appear to be very optimistic about next year, 2022. That's an automatic positive emotional response. Gen X took 2020 hard and taking 2021 even harder. They're not really that optimistic about 2022.



## Gen X is particularly sour on the economy, politics and climate change.

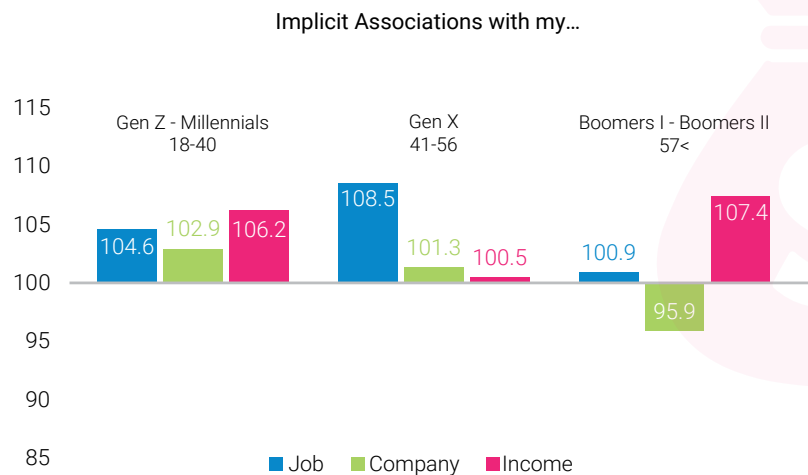




## Boomers are not happy with their company – but it's not about the pay.

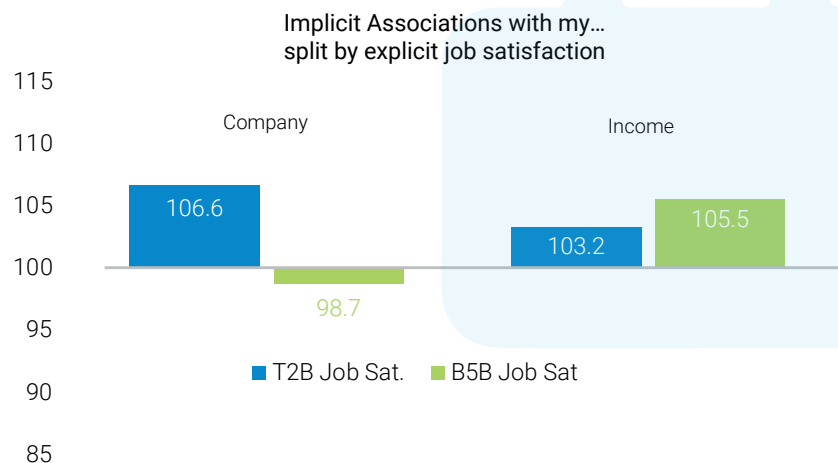
Satisfaction with...	Gen Z - Millennials	Gen X	Boomers
My Company	4.8	4.7	4.9
My Job	4.8	4.7	4.9

Boomers feel worse about their jobs and negative about their company, but we wouldn't know that based on what they said.



## What else would have been missed without implicit?

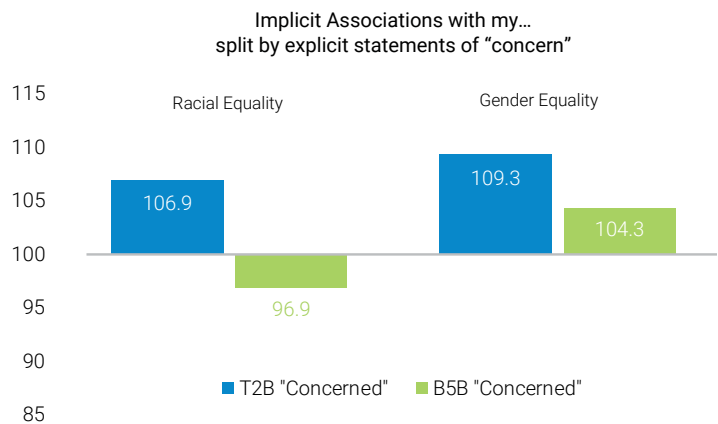
Job satisfaction is dependent on workers' emotional associations with their company, not their income.



## Negative implicit bias gets expressed as lack of concern.

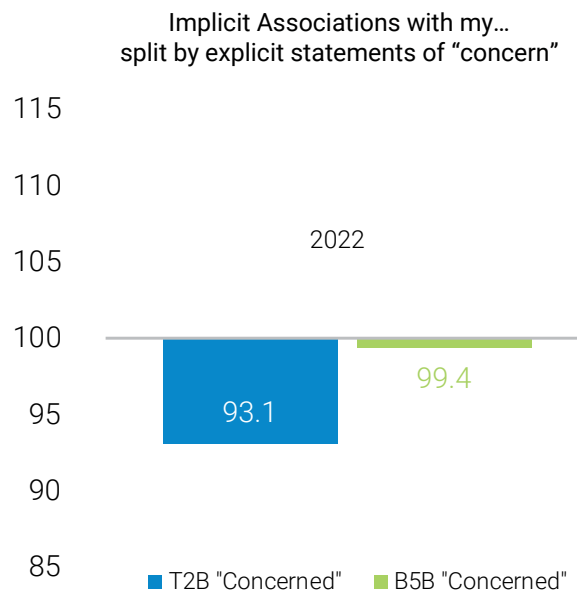
Those highly concerned about racial equality feel implicitly positive about the concept. Those who self-report that they are “not concerned” are actually also concerned - they feel implicitly negative about racial equality.

*The negative emotional associations on racial equality among those “not concerned” is not reflected on the issue of gender equality.*



## The single strongest implicit predictor of expressed anxiety about 2022 is “the economy”.

Of all implicit associations tested, anxiety over the economy significantly separated those expressed high versus low anxiety about next year. Consciously expressed anxiety about 2022 is related to implicit emotional feelings towards the economy.





# IN CONCLUSION

1

## **The emotional impact of the pandemic is not equal across generations.**

- Gen Z and Millennials have cemented less negative associations with the past in their memories while also feeling implicit optimism about the future.
- Boomers were hit hard by the pandemic, find themselves anxious about their company and their job, and yet show significant signs of hope for next year.
- Emotion is in the balance for Gen X – the generation bearing a big burden of children in the home during the last two years, showed longer lasting emotional effects of the pandemic. Gen X is anxious about the economy, politics and climate change – and those implicit feelings are shaping their outlook for 2022.

2

## **Empathy leads to management and marketing decisions that are human centric and socially sensitive.**

- Managers need to lean into their workforce to understand the drivers of company and job emotional appeal. The data reveal that factors other than income explain the emotional connection to a workplace.
- Marketers need to constantly dip their cups into this new stream of human emotion data. Messages that communicate an understanding of the emotional anxieties and inspirations of each generation and authentically connect with the brand, will win in this new age of empathy.

3

## **With this new stream of emotion data, what answers will we look for in our dipping cups?**

- How can Gen X draw positive inspiration from Millennials, Gen Z and Boomers?
- How can employers better address the emotional needs of the generations in their workforce?
- How can we produce marketing that makes an authentic emotional connection with one group without making those in the out-group feel badly?
- How can we get more people excited about Space Exploration?

### **Contact Sentient Decision Science**

If you are interested in accessing the anonymized data, please contact Sentient for details on usage. Please mention you are interested the Implicit Generational Tracker study:

<https://www.sentientdecisionscience.com/company/contact/>

### **Contact PureSpectrum**

For more information on PureSpectrum and their global sampling platform visit:

<https://www.purespectrum.com/contact/>

### **SENTIENT DECISION SCIENCE**

GLOBAL HQ  
145 Maplewood Ave #401  
Portsmouth, NH 03801  
(603) 570-4819  
[sentientdecisionscience.com](https://www.sentientdecisionscience.com)

@SentientInsight

### **PURESPECTRUM**

GLOBAL HQ  
31416 Agoura Road #210  
Westlake Village, CA 91361  
(877) 865-PURE  
[purespectrum.com](https://www.purespectrum.com)

@PureSpectrum\_