

Hidden Heuristics in All-time Favorites Songs

A Prodigious Analysis through the Lens of Decision Heuristic Science



Introduction

Songwriting has long served as a potent tool for artists to relieve their emotions, deal with loss, overcome disappointment and share elation. They relate to the world around them through their songs!

In this white paper, Newristics analyzes some classic, well-loved songs and delves into the realm of the subconscious mind of the lyricists using decision heuristics science. Perhaps unbeknownst to the song lyricists, many great songs speak to heuristics and biases that drive human decision making.

Understanding the heuristics embedded in the words of a song can provide a window into the hidden or unspoken drivers of the song's appeal. Sometimes the lyrics point out the irrationalities of the songwriter, other times it's the musician who is pointing out irrationalities of decision making in the society at large. Either way, it's a totally new way to look at a song!

Using the Nobel prize-winning science behind how humans make heuristics-based decisions, Newristics analyzes the lyrics of 10 famous songs in this white paper. As an authority on heuristics-based messaging, only Newristics could take on a task as quirky as this one!

With the most comprehensive database of heuriticized messages, powered by proprietary machine learning algorithms and bolstered by the best minds in heuristic science, Newristics is at the forefront of heuristic science application to messaging.

So, grab a cappuccino, put on your headset, and enjoy this whimsical whitepaper in which Newristics is able to effectively put the spotlight on the power of decision heuristics on some cherished classics.

I Hope You Dance

Singer - Lee Ann Womack

I hope you never lose your sense of wonder
You get your fill to eat but always keep that hunger
May you never take one single breath for granted
God forbid love ever leave you empty handed
I hope you still feel small when you stand beside the ocean
Whenever one door closes I hope one more opens
Promise me that you'll give faith a fighting chance
And when you get the choice to sit it out or dance
I hope you dance
I hope you dance
I hope you never fear those mountains in the distance
Never settle for the path of least resistance
Livin' might mean takin' chances, but they're worth takin'
Lovin' might be a mistake, but it's worth makin'
Don't let some Hellbent heart leave you bitter
When you come close to sellin' out, reconsider
Give the heavens above more than just a passing glance
And when you get the choice to sit it out or dance
I hope you dance (Time is a wheel in constant motion
always rolling us along)
I hope you dance
I hope you dance (Tell me who wants to look back on their
years and wonder)
I hope you dance (Where those years have gone?)
I hope you still feel small when you stand beside the ocean
Whenever one door closes I hope one more opens
Promise me that you'll give faith a fighting chance
And when you get the choice to sit it out or dance
Dance
I hope you dance
I hope you dance (Time is a wheel in constant motion
always rolling us along)
I hope you dance (Tell me who wants to look back on their
years and wonder?)



I Hope You Dance

Singer - Lee Ann Womack

Heuristic Used: Status Quo Bias

WHAT IS STATUS QUO BIAS?

Status quo bias is an emotional bias or a preference for the current state of affairs. The current baseline is taken as a reference point and any change from that baseline is perceived as a loss.

WHY STATUS QUO BIAS?

There are two themes in this song:

1. Don't be complacent and keep aspiring for something better
2. Don't be afraid of the unknown and take chances

Status Quo Bias is all about being afraid of the unknown and staying with your current situation, good or bad. When the situation is good you stay there and become complacent. When the situation is bad and you still stay there, because you are fearful of the situation getting even worse if you try something different. SQB is a key reason why victims of household violence don't leave their abusive partners.

Dance is just a metaphor for doing something that makes you uncomfortable, something that you are afraid of.

Three Little Birds

Singer - Bob Marley

"don't worry about a thing,
'cause every little thing gonna be all right.
singin': "don't worry about a thing,
'cause every little thing gonna be all right!"
Rise up this mornin',
smiled with the risin' sun,
three little birds
pitch by my doorstep
singin' sweet songs
of melodies pure and true,
sayin', ("this is my message to you-ou-ou:")
Singin': "don't worry 'bout a thing,
'cause every little thing gonna be all right."
singin': "don't worry (don't worry) 'bout a thing,
'cause every little thing gonna be all right!"



Three Little Birds

Singer - Bob Marley

Heuristic Used: Zero Risk Bias

WHAT IS ZERO RISK BIAS?

Zero-risk bias is an irrational preference for options that completely eliminate risks even in a situation where alternative options will reduce the overall risk by more and also end up in better results. This means that we often prefer the absolute certainty of a smaller benefit when compared to a larger benefit of less certainty.

WHY ZERO RISK BIAS?

Zero risk bias is all about worry! Worrying about the smallest things possible. Going overboard to address every small thing is not efficient. Most of the time, you don't have to be 100% certain about something to go forward, but if you have zero risk bias, now you will continue to work harder to reduce the risk down to zero, when really you should have stopped at 80% or 90%.

I'd do anything for love but I won't do that

Singer - Meat Loaf

I would do anything for love
I'd never lie to you and that's a fact
But I'll never forget the way you feel right now
Oh no, no way
And I would do anything for love
Oh I would do anything for love
I would do anything for love, but I won't do that
No, I won't do that



I'd do anything for love but I won't do that

Singer - Meat Loaf

Heuristic Used: Attribute Substitution

WHAT IS ATTRIBUTE SUBSTITUTION?

Attribute substitution refers to an attempt to solve a complex problem with another attribute that is an incorrect substitution. In an attribute substitution scenario, people may substitute a hard problem for an easy one incorrectly, without realizing it.

WHY ATTRIBUTE SUBSTITUTION?

Attribute substitution means that instead of doing what you should, you do something else that is a lot easier and you rationalize to yourself that you are doing what is needed. You substitute one attribute for another, even though it's not really a substitution and you know it.

Most people know that the best source of bioavailable vitamins and minerals is fresh fruits and vegetables, but it's neither easy nor tasty to consume them. So, you replace the kale with kale chips (ymmm!), the fruit with Greek yogurt with fruit at the bottom (delicioso!) and then to top everything off, you take a 100% whole foods based, high end multivitamin. Or you could just eat your broccoli and brussel sprouts!

How does this song relate to Attribute Substitution? As mentioned, the name of the song is literally the definition of the heuristic: I'd do anything for love, BUT I WON'T DO THAT. He doesn't really define in the song what "THAT" is, but essentially, he is saying that while on the one hand that he would do anything for love, on the other hand, as soon as what he needs to do becomes difficult, he chickens out!

Take me home country roads

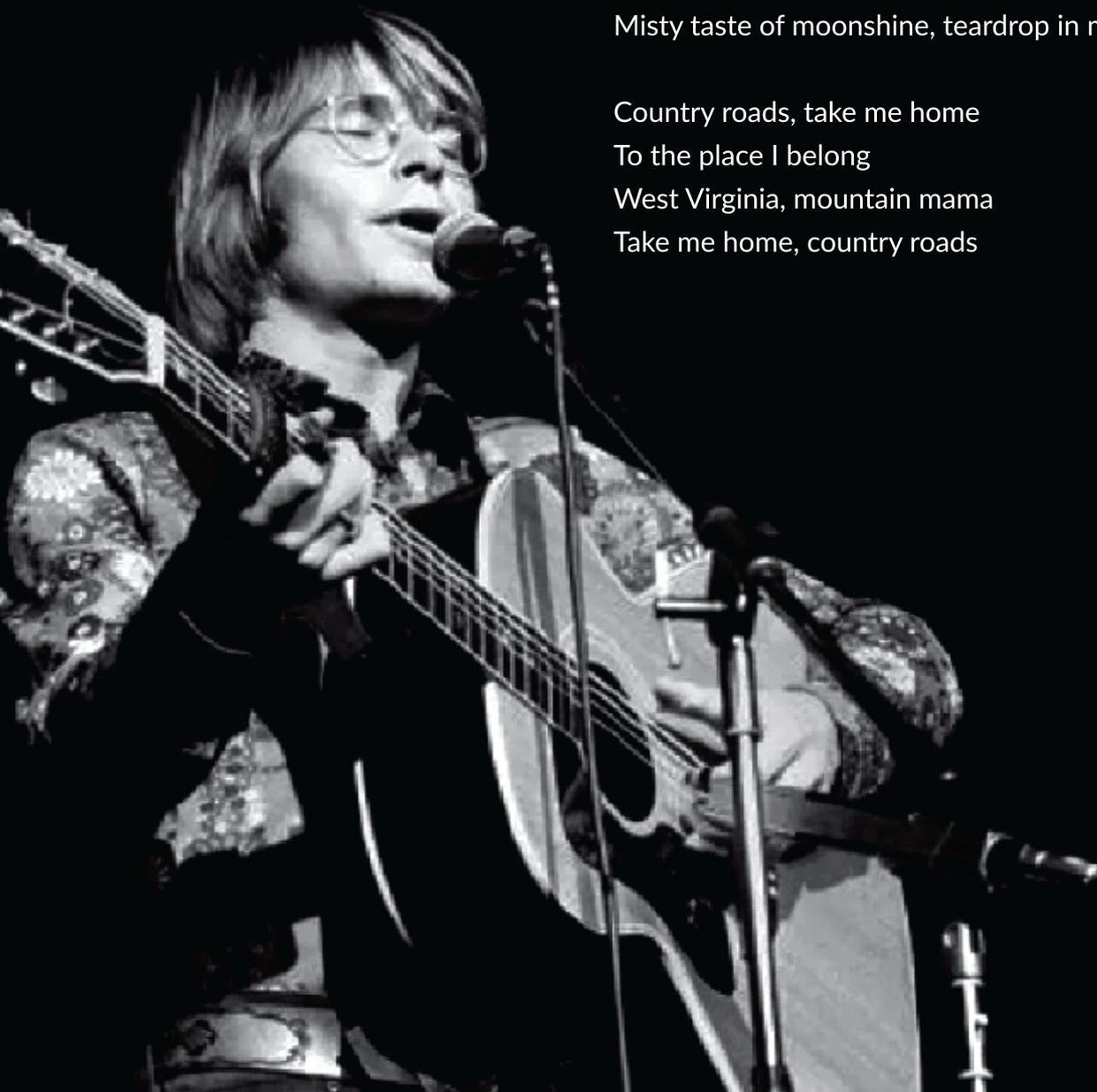
Singer - John Denver

Almost heaven, West Virginia
Blue Ridge Mountains, Shenandoah River
Life is old there, older than the trees
Younger than the mountains, blowing like a breeze

Country roads, take me home
To the place I belong
West Virginia, mountain mama
Take me home, country roads

All my memories gather round her
Miner's lady, stranger to blue water
Dark and dusty, painted on the sky
Misty taste of moonshine, teardrop in my eye

Country roads, take me home
To the place I belong
West Virginia, mountain mama
Take me home, country roads



Take me home country roads

Singer - John Denver

Heuristic Used: Anchoring Effect

WHAT IS ANCHORING EFFECT?

Anchoring effect plays out when people rely too heavily on the first piece of information they receive and use it as a point of reference. The human mind does not consider the value of something based on its intrinsic value but rather compares different things against one another, making decisions based on these comparative values.

WHY ANCHORING EFFECT?

Anchoring Effect means that the earliest exposures you had on a topic act as anchors for you for the rest of your life whenever that topic comes up again. The original anchor may have been appropriate back when you formed it, but things change and the anchor may not continue to apply, but you don't let go of it.

Throughout the entire song, he is describing anchors he formed as a kid growing up in West Virginia. Since then, West Virginia has likely changed a lot. Millions of trees cut down, rivers polluted, wildlife displaced, mines shut down, and country roads either abandoned or replaced by condos and office parks. Yet, his anchors for West Virginia have not changed!

I still haven't found what I am looking for

Singer - U2

I have run through the fields
Only to be with you
Only to be with you
I have run I have crawled
I have scaled these city walls
These city walls
Only to be with you
But I still haven't found
What I'm looking for
But I still haven't found
What I'm looking for



I still haven't found what I am looking for

Singer - US

Heuristic Used: Disjunctive Rule

WHAT IS DISJUNCTIVE RULE?

People establish a minimally acceptable cutoff point for each relevant product attribute; any brand meeting or surpassing the cutoff point for any one attribute is considered an acceptable choice. This heuristic is very influential in the large appliance category, e.g. Dishwashers, Washer, Dryer, etc.

WHY DISJUNCTIVE RULE?

Disjunctive Rule says that sometimes when you are evaluating products, all you care for is a basic product feature and the first product that offers you that feature is acceptable to you. In the song, the writer is fighting Disjunctive Rule. He has experienced the basic features, but he is not satisfied. He wants to keep looking for more features. In fact, he knows what the ultimate feature set is and will keep looking until he gets it.

This is different from Compromaxing, where the mental shortcut is All or Nothing. He is accepting sub-optimal features, but not stopping there.

High Hopes

Singer - Panic! at the Disco

Had to have high, high hopes for a living
Shooting for the stars when I couldn't make a killing
Didn't have a dime but I always had a vision
Always had high, high hopes
Had to have high, high hopes for a living
Didn't know how but I always had a feeling
I was gonna be that one in a million
Always had high, high hopes

Mama said
Fulfill the prophecy
Be something greater
Go make a legacy
Manifest destiny
Back in the days
We wanted everything, wanted everything

Mama said
Burn your biographies
Rewrite your history
Light up your wildest dreams
Museum victories, everyday
We wanted everything, wanted everything
Mama said don't give up, it's a little complicated
All tied up, no more love and I'd hate to see you waiting



High Hopes

Singer - Panic! at the Disco

Heuristic Used: Disappointment aversion

WHAT IS DISAPPOINTMENT AVERSION?

When making decisions, one should consider all outcomes, the likelihood and effect of each outcome, and make a choice based on that. What people really do is often different. They think about the worst possible outcome and how they would feel about that outcome (their level of regret). They then choose the option that minimizes regret, even though it may not be optimal.

WHY DISAPPOINTMENT AVERSION?

We usually think about Disappointment Aversion in the first person, i.e. we avoid decisions that we feel may lead to disappointment. For example, most people who are looking to lose weight want to shed 20 lbs and if they think that going on a Nutrisystem plan will not help them lose 20 lbs and they would just be disappointed, they won't even start. In reality, Nutrisystem may help them lose 8 lbs, which is better than not losing anything at all or even worse, gaining weight during the same period.

We rarely think of Disappointment Aversion in the context of disappointing others, which is what both their hit songs are really about. Children are highly motivated to please their parents, to make them proud, and to not disappoint them. Often, they care more about whether their parent is proud of their accomplishments, than they care about being proud of their own accomplishments.

The Gambler

Singer - Kenny Rogers

You've got to know when to hold 'em
Know when to fold 'em
Know when to walk away
And know when to run
You never count your money
When you're sittin' at the table
There'll be time enough for countin'
When the dealin's done

Every gambler knows
That the secret to survivin'
Is knowin' what to throw away
And knowin' what to keep
'Cause every hand's a winner
And every hand's a loser
And the best that you can hope for is to die
in your sleep



The Gambler

Singer - Kenny Rogers

Heuristic Used: Hot Hand Fallacy

WHAT IS HOT HAND FALLACY?

The hot hand fallacy is the purported phenomenon that a person who experiences a successful outcome has a greater chance of success in further attempts.

WHY HOT HAND FALLACY?

Hot Hand Fallacy means that people forget that just because they have been “on a roll lately” doesn’t mean they will “continue to be on a roll”. In other words, Newton’s laws of motion don’t apply in economics! Just because you’ve had a hot streak in gambling, sports, etc. doesn’t mean that you will win the next bet/game. Each game is independent and so is the probability of you winning or losing that game.

Kenny Rogers is describing a gambler who has learned not to fall for Hot Hand Fallacy.

Another Brick in the Wall

Singer - Pink Floyd

We don't need no education
We don't need no thought control
No dark sarcasm in the classroom
Teachers leave them kids alone
Hey, teachers, leave them kids alone
All in all it's just another brick in the wall
All in all you're just another brick in the wall

We don't need no education
We don't need no thought control
No dark sarcasm in the classroom
Teachers leave those kids alone
Hey teachers, leave those kids alone
All in all you're just another brick in the wall
All in all you're just another brick in the wall

"Wrong, do it again! Wrong, do it again!"

"If you don't eat yer meat, you can't have any pudding

How can you have any pudding if you don't eat yer meat?"

"You, yes, you behind the bike sheds, stand still, laddy"



Another Brick in the Wall

Singers - Pink Floyd

Heuristic Used: Dunning Kruger Effect

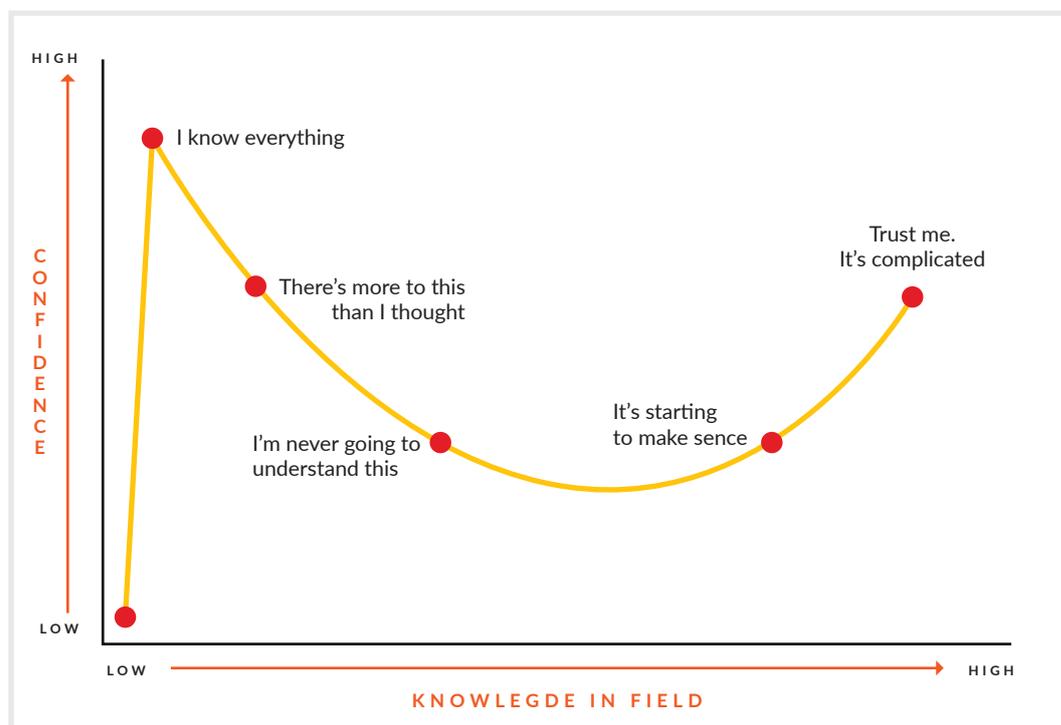
WHAT IS DUNNING KRUGER EFFECT?

Dunning-Kruger effect is a cognitive bias in which people assess their cognitive ability as being greater than it is. It comes from the inability of people to recognize their lack of ability.

WHY DUNNING KRUGER EFFECT?

Dunning Kruger Effect is about how much you “think” vs. how much you “actually” know. DKE tells us that when you actually know a little, you may think that you know a lot. Conversely, when you actually know a lot, you may realize that you don’t know much at all and that there is so much more to know.

The following graph helps visualize the Dunning Kruger Effect. X axis is your actual knowledge. Y axis is your perception of knowledge, i.e. how confident you are about your knowledge. This effect can explain why the most learned people in any field are typically the most humble also because they know that they don’t know it all.



Sweet Caroline

Singer - Neil Diamond

Where it began, I can't begin to knowing
But then I know it's growing strong
Was in the spring
Then spring became the summer
Who'd have believed you'd come along

Hands, touching hands
Reaching out, touching me, touching you

Sweet Caroline
Good times never seemed so good
I'd be inclined
To believe they never would
But now I

Look at the night and it don't seem so lonely
We filled it up with only two
And when I hurt
Hurting runs off my shoulders
How can I hurt when I'm holding you

One, touching one
Reaching out, touching me, touching you

Sweet Caroline
Good times never seemed so good
I'd be inclined
To believe they never would
Oh no, no

Sweet Caroline
Good times never seemed so good
Sweet Caroline
I believe they never could



Sweet Caroline

Singer - Neil Diamond

Heuristic Used: Peak End Rule

WHAT IS PEAK END RULE?

Peak end rule says that people tend to remember experiences at the peak and can easily forget what came before and after the peak experience, how much time it took, how pleasurable or not it was, etc. Conceptually, it is related to Duration Neglect heuristic – Peak end rule is more focused on the peak experience, Duration Neglect is focused on everything that happens before and after. Peak End Rule is used heavily on singing competition shows like American Idol, Voice etc. Often contestants try to “hit that one big note” towards the end of the song even though its highly unnatural and most great singers don’t sing like that.

WHY PEAK END RULE?

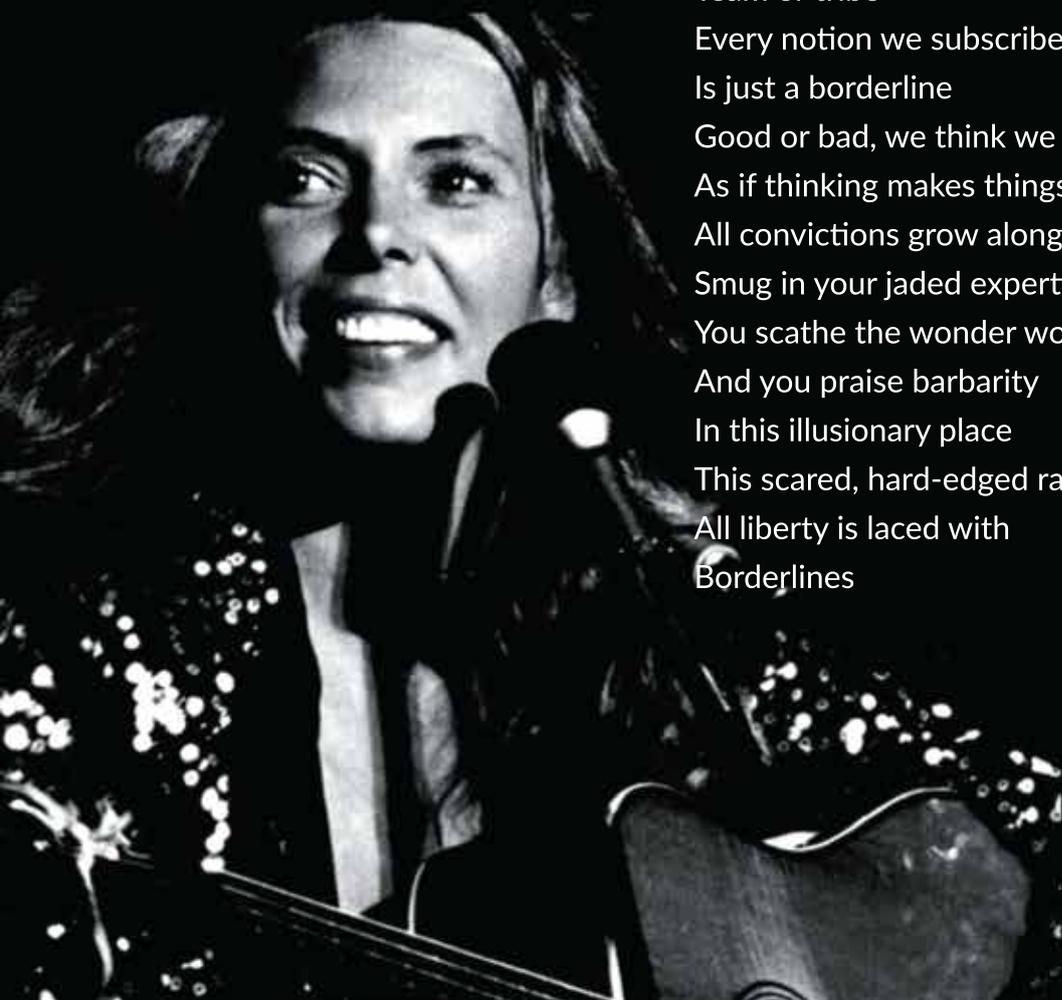
If you read the lyrics, the whole song is one long example of Peak end rule. It’s supposed to be a love song about his wife, but her name was Marcia and he needed a 3 syllable name for the melody he had in his head. He remembers when she came along (spring), he remembers how they touched hands, how he held her, and that’s about it!

The Red Sox play this song every time they come to bat. In an interesting way, this Peak end rule based song has probably create millions of peak memories for so many people around the world!

Borderline

Singer - Joni Mitchell

Everybody looks so ill at ease
So distrustful, so displeased
Running down the table
I see a borderline
Like a barbed wire fence
Strung tight, strung tense
Prickling with pretense
A borderline
Why are you smirking at your friend?
Is this to be the night
When all well-wishing ends?
All credibility revoked?
Thin skin, thick jokes
Can we blame it on the smoke
This borderline?
Every bristling shaft of pride
Church or nation
Team or tribe
Every notion we subscribe to
Is just a borderline
Good or bad, we think we know
As if thinking makes things so
All convictions grow along a borderline
Smug in your jaded expertise
You scathe the wonder world
And you praise barbarity
In this illusionary place
This scared, hard-edged rat race
All liberty is laced with
Borderlines



Borderline

Singer - Joni Mitchell

Heuristic Used: Distinction Bias

WHAT IS DISTINCTION BIAS?

Human beings are biased to want to find greater distinction between things than what really exists. The more they compare things side by side, the more distinction they find, to the point that they start making it up. All of us have used phrases like “splitting hairs”, “nitpicking” etc. – they all refer to Distinction Bias.

WHY DISTINCTION BIAS?

The whole song is about how we think we are soooooo different from others, when we are all the same! Joni is saying that there are only “borderline” differences between us. But we keep finding more and more differences – men are from mars, women are from venus. Catholics vs. Protestants, North Sudanese vs. South Sudanese, Hindu vs. Muslims – the list goes on! The reality is that we are all human. We all want the same things – love, happiness, peace!



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