

# AI-03677 Marginal Utility in Retirement

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What is marginal utility? How does it relate to retirement financial planning, accumulation and decumulation? How does it relate to safe withdrawal rate relating to Legacy = 0, or near zero. Which one to choose, 20x, 25x or 33x. Tell more.

Q: What is your primary retirement goal?

A: Balance spending + leave something

Q: How do you think about longevity risk?

A: Planning conservatively (90+)

Q: Do you have guaranteed income (pension, Social Security, annuity)?

A: Yes — covers most baseline expenses

Let's tie this together carefully, because you're asking about three layers at once: **economic theory (marginal utility), portfolio strategy (accumulation vs. decumulation), and withdrawal philosophy (20x–33x, legacy vs. zero).**

## 1) What is Marginal Utility (in plain terms)

**Marginal utility = the satisfaction you get from one additional unit of money or consumption.**

**Key principle:**

1. The **first dollars** you spend (food, shelter, safety) have **very high utility**
2. Later dollars (luxury upgrades, excess wealth) have **lower utility**

3. This is called **diminishing marginal utility**

### Simple example:

1. First \$1,000/month → survival → **extremely valuable**
2. Next \$1,000 → comfort → **very valuable**
3. Next \$10,000 → luxury → **nice, but less impactful**
4. Next \$1,000,000 → legacy → **psychological, not experiential**

👉 In retirement, this flips your thinking:

- **Money unused = utility never realized**
  - **Oversaving = delayed or lost utility**
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## 2) Marginal Utility in Accumulation vs Decumulation

### A. Accumulation Phase (Working Years)

Your mindset is:

1. Maximize wealth
2. Delay consumption
3. Compound aggressively

But here's the hidden issue:

4. You are **trading high-utility time (youth/health)** for **low-utility dollars (later wealth)**
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### B. Decumulation Phase (Retirement)

Now the equation reverses:

1. Your **time horizon shrinks**
2. Your **health capital declines**

3. Your **utility curve steepens**

👉 This creates a powerful shift:

**The same \$1 has MORE utility now than later**

So:

4. Under-spending = **utility destruction**

5. Over-saving = **economic inefficiency**

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## 3) Safe Withdrawal Rate (SWR) through Marginal Utility

The classic rules:

1. **20x (5%)** → aggressive spending
2. **25x (4%)** → balanced
3. **33x (3%)** → conservative

But these are not just risk levels—they represent **utility philosophies**.

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### A. 33x (3%) — “Capital Preservation Bias”

1. Very low failure risk
2. High probability of large leftover wealth
3. **Low marginal utility realization**

👉 Problem:

- You die with **unused utility**
  - Wealth becomes **abstract (numbers, not experiences)**
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### B. 25x (4%) — “Balanced Utility”

1. Reasonable safety

2. Moderate legacy
3. Good consumption smoothing

👉 This is the **classic optimal compromise**

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## C. 20x (5%) — “Utility Maximization”

1. Higher spending early
2. Higher sequence risk
3. Lower expected legacy

👉 But:

- Maximizes **lifetime enjoyment**
  - Matches **declining future utility**
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## 4) Legacy = 0 vs Leaving Something

This is fundamentally a **utility allocation problem across time and people**

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### A. Legacy = 0 (Die with Zero concept)

1. Maximizes personal lifetime utility
2. Assumes:
  - No strong bequest motive
  - Confidence in lifespan estimate

👉 Risk:

3. Longevity risk
  4. Psychological discomfort
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### B. Leave Something (Your stated goal)

You said:

“Balance spending + leave something”

This implies:

1. You value:
  - Personal consumption utility
  - Legacy utility (family, meaning, identity)

👉 So your utility function is **dual-purpose**:

2.  **$U(\text{total}) = U(\text{self}) + U(\text{legacy})$**

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## 5) Your Situation (Important Insight)

You said:

1. Planning to **90+**
2. Have **guaranteed income covering baseline**

👉 This changes everything.

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### Guaranteed Income = Utility Floor

Your pension / Social Security acts like:

1. A **safety net**
2. Covers:
  - Food
  - Shelter
  - Healthcare basics

👉 That means:

### Your portfolio is NOT for survival

It is for:

3. Lifestyle

4. Flexibility

5. Legacy

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## 6) Implication for Withdrawal Strategy

Because your basics are covered:

**You can safely shift toward HIGHER marginal utility use**

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### Optimal Strategy for YOU

#### 1. Use a “Layered Withdrawal Approach”

##### Layer 1: Guaranteed Income

1. Covers essential expenses → no stress

##### Layer 2: Portfolio Spending

1. Use **4%–5% dynamic withdrawal**
2. Adjust based on markets

##### Layer 3: Legacy Reserve

1. Keep a **protected portion** (e.g., 20–30%)
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#### 2. Which Multiple Should You Choose?

Given your profile:

##### **✗ 33x (Too conservative for you)**

1. Leads to over-accumulation
  2. Wastes utility
  3. You already have safety
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## ✓ 25x (Strong baseline)

1. Good balance
  2. Works well psychologically
  3. Leaves likely surplus
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## ✓ or even 20x (Viable for you)

Because:

1. You have income floor
2. You're already 59
3. You value spending + some legacy

👉 This becomes very reasonable

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# 7) The Real Insight: Dynamic Marginal Utility Strategy

Instead of fixed SWR, think like this:

## Spend MORE when:

1. Health is good
2. Energy is high
3. Experiences are possible

## Spend LESS when:

1. Utility naturally declines (80+)
  2. Needs simplify
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# 8) Practical Framework (Your Case)

## 1. Define 3 Buckets

1. **Essentials** → covered by guaranteed income ✓
  2. **Enjoyment Fund** → spend more early (60–75)
  3. **Legacy Fund** → preserve intentionally
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## 2. Dynamic Withdrawal Rule

1. Start at **4.5%–5%**
  2. Adjust:
    - Market down → reduce slightly
    - Market up → increase or gift
- 

## 3. Legacy Target (Not Zero, Not Excess)

1. Aim for:
    - **20–40% of portfolio remaining**
  2. Not accidental
  3. Not excessive
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# 9) The Core Truth Most Retirees Miss

1. They optimize for **not running out of money**
2. Instead of optimizing for **not running out of life utility**

👉 These are NOT the same.

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# 10) Bottom Line for You

Given everything you said:

**Best fit:**

1. **Mindset:** Utility-aware spending
  2. **Multiple:** ~20x–25x
  3. **SWR:** ~4%–5% dynamic
  4. **Legacy:** intentional, not maximal
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## Final Thought

Marginal utility in retirement is about this:

The goal is not to die rich.

The goal is to convert money into meaning **before time runs out**—  
while preserving enough to feel secure and leave something behind.

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If you want, I can build you a **personalized glidepath (age 59–95)** showing:

- spending curve
- portfolio trajectory
- probability of legacy

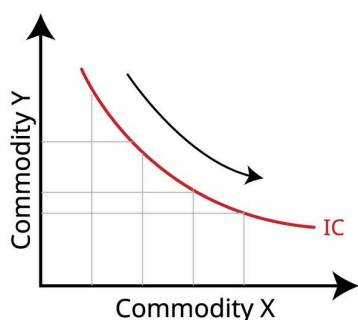
That's where this becomes very concrete.

Gemini

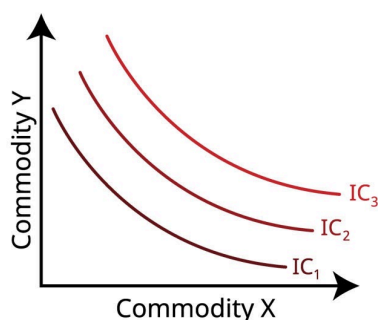
## Understanding Marginal Utility in Retirement

**Marginal utility** is the added satisfaction or benefit a consumer derives from consuming one additional unit of a good or service. In economics, the **Law of Diminishing Marginal Utility** states that as you consume more of something, the utility gained from each subsequent unit decreases.

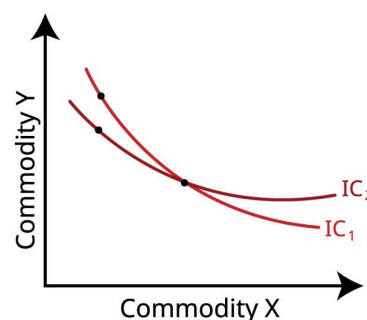
# Indifference Curve



Indifference curve slopes downward to the right



Higher level of Indifference curve represents higher level of satisfaction



Indifference curve do not intersect each other

Getty Images

## 1. Marginal Utility in Accumulation vs. Decumulation

In the context of your financial journey, the value of a dollar changes depending on which phase you are in:

- **Accumulation:** The marginal utility of a dollar is high because it represents **security and future freedom**. Every dollar saved builds the "floor" of your retirement. However, there is a "utility peak" where saving an extra thousand dollars provides almost no additional peace of mind but costs you significant current life experiences.
- **Decumulation:** The goal shifts from utility through *growth* to utility through *deployment*. Because your baseline expenses are already covered by guaranteed income, the marginal utility of your investment portfolio is tied to **discretionary fulfillment**—travel, comfort, or health.

## 2. The Relationship to Safe Withdrawal Rates (SWR)

When aiming for a **Legacy = 0 (or near zero)**, the SWR is no longer about preserving the "golden goose" indefinitely; it is about ensuring the goose is consumed exactly as the lights go out.

- **The Utility of the Last Dollar:** If you die with \$1 million, that money has a marginal utility of **zero** to you. By over-saving or under-spending, you effectively traded years of your youth/energy for "units of utility" you never consumed.
- **The SWR Buffer:** A traditional 4% rule (25x) is designed to prevent failure. But if your baseline is covered, a "failed" portfolio doesn't mean "no food," it just means "fewer vacations." This higher risk tolerance allows for a more aggressive decumulation strategy.

### 3. Comparing 20x, 25x, and 33x

The "Multiplier" represents how many years of your desired annual withdrawal you have saved.

Multiplier	Withdrawal Rate	Context	Utility Alignment
20x	5.0%	Aggressive	High utility now; higher risk of depleting capital early. Ideal for "Die With Zero."
25x	4.0%	Standard	The "Goldilocks" zone for many; balances current spending with high success probability.
33x	3.0%	Ultra-Safe	Extremely low risk; often results in a massive accidental legacy (low lifetime utility).

### 4. Strategic Analysis: Which to Choose?

Since your **baseline expenses are already covered** by guaranteed income, your portfolio exists primarily for "the extras." This changes the math of marginal utility significantly:

1. **The Case for 20x:** If your goal is to maximize life experiences while you have the health and mobility to enjoy them, 20x (a 5% withdrawal rate) is powerful.

Since you aren't at risk of homelessness (due to your pension/SS), the "downside" of running low in your 90s is simply reverting to a baseline lifestyle.

2. **The Case for 25x:** This is the safest bet for someone planning for **90+ longevity**. It provides a psychological safety net while still allowing for a steady decumulation that trends toward zero over a 30-year horizon.
3. **The Case against 33x:** For your specific situation, 33x likely creates **Negative Utility**. You would be working longer or spending less than necessary, only to leave a large surplus that contradicts your "Balance spending + leave something" goal.

## The 22 Principles of Marginal Utility in Retirement

1. **Diminishing Returns:** The 1st vacation of the year adds more joy than the 10th.
2. **Health-Utility Correlation:** A dollar spent on travel at age 65 has higher utility than at age 85.
3. **The "Safety Floor":** Once your floor is covered, every extra dollar has decreasing personal survival value.
4. **Time vs. Money:** In retirement, time is the scarce resource, making the marginal utility of "bought time" (convenience) soar.
5. **Memory Dividends:** Spending early creates memories that provide "utility" for the rest of your life.
6. **The Zero Floor:** Wealth at death is utility left on the table.
7. **Tax Efficiency:** Withdrawing too much at once can lower marginal utility due to higher tax brackets.
8. **Longevity Insurance:** Guaranteed income acts as a "Utility Floor" that prevents it from ever hitting zero.
9. **The Hedonic Treadmill:** Be wary of lifestyle creep that requires more dollars for the same unit of joy.
10. **Opportunity Cost:** Saving for a "33x" buffer costs you the utility of what that money could have done today.

11. **Psychological Liberty:** The utility of "knowing you're okay" often outweighs the utility of the actual money.
12. **The 50/50 Rule:** Consider spending 50% of any surplus performance to capture utility during market upswings.
13. **Health Span:** Utility is capped by your physical ability to engage with the world.
14. **Inflation Erosion:** Marginal utility must be adjusted for the future cost of goods.
15. **Relative Wealth:** Comparing yourself to others lowers your perceived marginal utility.
16. **Giving While Living:** The utility of seeing an heir enjoy a gift is higher than leaving it in a will.
17. **Adaptability:** The ability to cut spending in down years preserves the long-term utility of the portfolio.
18. **Experience Compounding:** Early retirement spending can lead to skills/hobbies that provide free utility later.
19. **Risk Asymmetry:** The pain of losing a dollar is greater than the joy of gaining one (Loss Aversion).
20. **Cognitive Load:** A simpler 25x plan has higher utility than a complex 20x plan that causes stress.
21. **The "Last Lap" Effect:** In the final decade, the marginal utility of money drops almost to zero.
22. **Personal Values:** Utility is subjective; if "leaving something" is a core value, that legacy *is* your utility.

M365 Copilot

Great question set. You're really asking about **how economics (marginal utility) should shape retirement strategy**, not just "what multiple is safe."

I'll build this **from first principles**, then map it directly to **accumulation, decumulation, SWR, and the 20x / 25x / 33x decision**, using *your* stated goals.

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## 1 What Is Marginal Utility (in plain English)?

**Marginal utility** is the *additional satisfaction* you get from **one more unit of something**.

In money terms:

Each additional dollar is usually worth *less* to you than the previous dollar.

Examples:

- Going from **\$0** → **\$30k/year** = *life-changing*
- \$30k → \$60k = big improvement
- \$60k → \$90k = nice, but smaller impact
- \$300k → \$330k = almost no lifestyle change

This declining benefit is called **diminishing marginal utility of wealth**.

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## 2 Why Marginal Utility Matters So Much in Retirement

Retirement planning isn't about *maximizing wealth*.

It's about **maximizing lifetime utility**:

spending, security, flexibility, peace of mind, and legacy — weighted over time.

Money does **three different jobs** in retirement:

1. **Baseline security** (non-negotiable)
2. **Lifestyle enhancement**
3. **Psychological comfort / legacy**

Marginal utility helps decide **how much is enough for each job**.

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## 3 Accumulation Phase: When Marginal Utility Guides "How Hard to Push"

During accumulation:

- Early savings → *extremely high marginal utility*

- Later savings → diminishing returns

Once:

- Core lifestyle is secure
- Retirement date is viable
- Longevity risk is addressed

Then:

Additional accumulation mostly buys **risk reduction and optionality**, not happiness.

That doesn't mean stop saving — it means **optimize**, not maximize.

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## 4 Decumulation: Where Marginal Utility Really Dominates

In retirement, marginal utility flips the typical fear logic:

### Spending Side

- Spending \$5k more/year at age 70 may increase enjoyment **meaningfully**
- Spending \$5k more/year at age 92 may not

So **front-loaded enjoyment** often produces higher lifetime utility.

### Holding Too Much Back

- Dying with very large unused assets = **zero utility**
- Highly conservative spending can *destroy utility* even if it feels "safe"

This is why some extremely wealthy retirees still feel anxious — their portfolio has surpassed its **useful marginal value**.

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## 5 How This Relates to Safe Withdrawal Rate (SWR)

SWR is just a **probabilistic liquidity rule**, not a utility-optimal rule.

Classic SWRs:

- **4% rule**  $\approx$  25x expenses
- **3%**  $\approx$  33x
- **5%**  $\approx$  20x

But SWR is very sensitive to **3 factors**:

## Factor 1: Guaranteed Income (You )

You said:

|  covers most baseline expenses

This is *huge*.

It means:

- Portfolio is **not funding survival**
- Marginal utility of portfolio income is higher for enjoyment and legacy
- You can tolerate **lower terminal portfolio value**

This alone **pushes you toward higher SWR (lower multiple)**.

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## Factor 2: Longevity Risk (You Conservative)

You plan for **90+**.

This argues for:

- Some conservatism
- But not extreme if baseline needs are guaranteed

Because:

| Portfolio failure  $\neq$  lifestyle collapse

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## Factor 3: Legacy = 0 or Near 0

Legacy preference massively affects optimal SWR.

Utility curve:

- Legacy from \$0  $\rightarrow$  \$200k = emotional value

- \$200k → \$2M often has sharply diminishing marginal value

You said:

### **Balance spending + leave something**

Not dominance of legacy, but not zero.

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## **6 So... 20x, 25x, or 33x? Let's Decide Rationally**

Let's frame each choice in **utility terms**, not fear terms.

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### **33x (≈3% SWR)**

#### **Pros**

- Very low sequence-of-returns risk
- High probability of large final estate

#### **Cons**

- **Lowest marginal utility**
- Likely under-spending
- Very high chance of dying with unused surplus

This is optimal only if:

- Legacy is a **primary goal**
- OR baseline expenses are *not* guaranteed

👉 **Not optimal for you**

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### **25x (≈4% SWR)**

#### **Pros**

- Balanced approach
- Strong historical success
- Reasonable legacy probability

## Cons

- Still slightly conservative when:
  - Guaranteed income exists
  - You're not legacy-maximizing

👉 **Reasonable default**, but not yet optimized

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## 🟢 20x ( $\approx 5\%$ SWR)

### Pros

- Maximizes early and mid-retirement utility
- Very appropriate when baseline income is guaranteed
- Legacy is possible but not forced

### Cons

- Higher variance outcomes
- Legacy less predictable

👉 **Often utility-optimal** in *your* setup — *if paired with flexible spending*

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## 7 The Optimal Answer for You (Not a Single Number)

Given your inputs:

- ✓ Baseline expenses covered
- ✓ Longevity planning to 90+
- ✓ Legacy desired but not dominant
- ✓ **Hybrid Strategy (Best Fit)**

Think in **tiers**:

### Tier 1: Core Portfolio (Safe)

- Target: **25x discretionary expenses**
- Withdrawal:  $\sim 4\%$

- Purpose: Spending confidence

## Tier 2: Flexible/Opportunistic

- Spend closer to **5% early**
- Reduce later if markets underperform
- Acts like a “utility accelerator”

## Tier 3: Residual Legacy

- Whatever remains
- No forced preservation

This aligns with:

- Marginal utility
- Human enjoyment curves
- Behavioral comfort
- Real-life uncertainty

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## 8 Key Mental Reframe (Very Important)

Retirement failure is not *running out of money*

Retirement failure is **running out of life with money unspent**

Marginal utility is the antidote to over-optimization.

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## 9 One Final Question (Optional, but Powerful)

When you imagine age **85**, which regret feels worse?

- A) “I spent a bit too much early”
- B) “I lived too cautiously despite being secure”

Your answer will usually reveal whether leaning **20x or 25x** is right.

If you want, next we can:

- Build a **utility-weighted withdrawal glidepath**
- Model a **floor + upside bucket strategy**
- Translate this into **actual annual spending bands**

Just say the word, Co-Pilot ready. ✈️

Copilot

Great set of questions — you're connecting the economic concept of *marginal utility* with practical retirement planning. Let's unpack this step by step.

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## Marginal Utility in Retirement

- **Definition:** Marginal utility is the additional satisfaction (or value) you get from consuming one more unit of a good or service. In retirement, it's about the *extra happiness or security* you gain from spending another dollar.
  - **Implication:** Early in retirement, spending on travel or experiences may deliver high utility. Later, as health declines or lifestyle shifts, the utility of extra spending may diminish. Conversely, the utility of security (not running out of money) may rise.
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## Accumulation vs. Decumulation

- **Accumulation phase:** Marginal utility helps explain why saving aggressively early can be rational — the utility of future security outweighs the utility of extra consumption today.
  - **Decumulation phase:** Each withdrawal should be weighed against the utility of current enjoyment versus the utility of preserving assets for later years or for heirs.
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## Safe Withdrawal Rate & Legacy

- **Legacy = 0 (or near zero):** If your goal is to spend down assets fully, then the marginal utility of leaving money behind is low. The safe withdrawal rate can be higher because you're not preserving capital for heirs.

- **Legacy > 0:** If leaving something matters, then withdrawals should be more conservative. The marginal utility of legacy increases, so you trade off current consumption for future bequests.

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## Which Multiple — 20x, 25x, or 33x?

These multiples refer to how many times your annual spending you should have saved:

- **20x:** Implies ~5% withdrawal rate. Works only if you have strong guaranteed income and are comfortable with higher risk of depletion.
- **25x:** Classic “4% rule.” Balances sustainability with reasonable spending. Good default if you want flexibility and some legacy.
- **33x:** Implies ~3% withdrawal rate. Very conservative, often chosen by those planning for long horizons (90+ years) or prioritizing legacy.

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## Applying to Your Situation

- **Primary goal:** Balance spending + leave something → marginal utility of both consumption and legacy matters.
- **Longevity risk:** Planning conservatively (90+) → pushes toward 25x–33x.
- **Guaranteed income covers baseline:** This reduces pressure on your portfolio, so withdrawals fund *discretionary* spending. Marginal utility of each extra dollar is high for lifestyle but less critical for survival.

👉 That suggests a **middle path**:

- Use **25x** as your baseline (4% rule).
- Adjust dynamically: spend more when markets are strong or health is good (higher marginal utility of experiences), spend less when markets are weak or as utility of consumption declines.
- If legacy becomes more important later, lean toward 33x.

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Would you like me to show you a **visual framework** comparing how marginal utility shifts across three phases of retirement (early, mid, late) and how that affects withdrawal choices?

Claude

## Marginal Utility and the Architecture of Enough

**Marginal utility** is the additional satisfaction (utility) gained from consuming one more unit of something. The foundational law: *each successive unit delivers less satisfaction than the one before it*. The first glass of water when you're thirsty is transformative. The fifth, unremarkable.

This isn't just economics trivia — it's a deep structural truth about how value actually works in human experience.

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## The Curve and What It Means

Utility from wealth follows a **concave curve** — steep at first, then flattening. Going from \$0 to \$100K in net worth changes your life dramatically. Going from \$2M to \$2.1M changes almost nothing felt. The math is the same. The lived experience is not.

This is why a dollar saved at age 28 carries more *utility potential* than a dollar saved at 68 — not because of compounding alone, but because the person at 28 likely has more unmet needs that money can address.

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## Accumulation Phase: Marginal Utility Rising... Then Not

During accumulation, you're climbing the steep part of the curve. Each milestone — emergency fund, debt elimination, first \$100K, first million — delivers a meaningfully higher quality of life or security. Marginal utility of additional wealth is **high and measurable**.

But most disciplined savers overshoot. They keep optimizing for accumulation past the inflection point — the zone where marginal utility of additional capital has flattened significantly. The psychological machinery that built the wealth (deferred gratification, frugality, vigilance) doesn't automatically shut off when it's no longer serving you. This is the **Erasure Effect applied to money** — the productivity-conditioned identity keeps accumulating because it no longer knows how to stop.

The practical consequence: **people arrive at retirement with far more capital than their utility curve requires**, and then manage it as though each dollar still carries the steep marginal utility of the early climb.

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## Decumulation: The Hardest Gear Shift in Personal Finance

Decumulation is psychologically brutal precisely because marginal utility theory *suggests you should spend* — yet behavioral economics shows people often can't.

The reasons are layered:

- **Loss aversion** (Kahneman): losses feel ~2x larger than equivalent gains. Watching a portfolio decline by \$50K in a bad market year registers as acute pain, even when the plan accounts for it
- **Identity fusion with net worth**: the number on the statement has become a proxy for safety, competence, and self-worth — spending it down feels like personal diminishment
- **Sequence-of-returns anxiety**: even financially literate retirees fear the catastrophic scenario disproportionately to its probability
- **Precautionary hoarding**: the longer the horizon, the larger the perceived threat of unknown costs (healthcare, longevity, inflation)

The result: most retirees **underspend dramatically** relative to what their wealth could support — dying with large, unintended estates. Research consistently shows retirees spend far less than safe withdrawal rates permit.

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## Safe Withdrawal Rate and the Legacy = 0 Problem

The classic **4% rule** (Bengen, 1994; Trinity Study) was calibrated to ensure a portfolio survives 30 years across historical market scenarios with a **high probability of leaving significant residual wealth**. It was never designed for Legacy = 0.

Here's the tension: **the 4% rule is actually quite conservative** — optimized for survival, not consumption. At Legacy = 0 (or near zero), a higher withdrawal rate

is mathematically defensible and *utility-maximizing*.

## What changes when Legacy = 0 is the target?

Variable	Legacy-Preserving	Legacy = 0
Safe withdrawal rate	~3.5–4%	~5–6%+ depending on horizon
Optimal strategy	Total return, balanced allocation	Annuitization, TIPS ladders, deliberate drawdown
Risk tolerance for sequence	Low	Can accept more, if hedged
Utility of terminal dollar	High (bequest motive)	Near zero
Key constraint	Don't run out	Don't die with too much

## The Bill Perkins Framework (*Die With Zero*)

Perkins makes the marginal utility argument explicitly: **a dollar spent at 75 delivers less utility than a dollar spent at 60**, because your health, mobility, and capacity for experience decline. The "optimal" wealth trajectory under this model is a deliberate glide path to near-zero at life expectancy — not a flat or growing balance.

This reframes the entire decumulation problem. Instead of asking *"how do I protect this portfolio?"* you ask *"what is the utility-maximizing spend rate across my remaining years, given my actual health trajectory?"*

## Tools for Legacy ≈ 0 Decumulation

### 1. Annuitization (partial or full)

Converts a lump sum into a guaranteed income stream — essentially outsourcing longevity risk to an insurer. For Legacy = 0, this is rational. You're buying certainty of consumption rather than preserving optionality for heirs.

### 2. TIPS / Bond Ladder

Build a ladder of inflation-protected bonds matching your expected lifespan. Each rung matures to fund a year of expenses. Capital is fully consumed by design.

### 3. Dynamic withdrawal strategies

Instead of a fixed 4%, use a flexible rate tied to portfolio performance and

remaining horizon. In good years, spend more. In down years, cut modestly. Guardrails strategies (Guyton-Klinger) formalize this.

#### 4. Life expectancy anchoring

Use actuarial data honestly. A healthy 65-year-old male has roughly a 50% chance of living past 85, and ~20% past 90. Model multiple scenarios — don't default to "live to 100" as a planning assumption if you're targeting Legacy = 0, as it systematically suppresses consumption.

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## The Deeper Marginal Utility Insight

Here's what most retirement planning misses: **the marginal utility of money is not constant across time even at the same wealth level.**

At 62, a dollar can buy adventure, health optimization, time with family, meaningful experiences. At 82, that same dollar buys far less in terms of actual utility — your ability to convert money into experience has declined. This means:

**The optimal strategy is front-loading spending in the high-utility window** — roughly your 60s and early 70s (what Perkins calls the "go-go years") — rather than conserving for a later period when money's marginal utility has collapsed.

This isn't recklessness. It's applying the core logic of diminishing marginal utility correctly across a time-varying utility curve.

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## The Synthesis

Marginal utility doesn't just explain why the first million matters more than the fifth. It explains why:

- Accumulation should have a target, not just a trajectory
- Decumulation requires a different psychological operating system than accumulation
- The 4% rule is a floor, not a ceiling, for Legacy = 0 planning
- Spending more earlier is often the utility-maximizing choice, not a failure of discipline

- The goal isn't to maximize terminal net worth — it's to maximize the **area under your utility-of-life curve** across your remaining years

The question retirement planning rarely asks — but should — is: *at what point does another saved dollar deliver less utility than a dollar spent now?* For most disciplined savers, that inflection point arrived well before they stopped accumulating.

## Your Answer: 25x — with a strong case for staying closer to 25x than 33x

Here's the logic, given your three inputs:

### Why not 20x

20x implies a ~5% withdrawal rate. That's a Legacy = 0 / shorter-horizon strategy. You want to leave something and you're planning to 90+. A 5% rate over 25–30 years carries meaningful depletion risk even with good markets. 20x is off the table for your profile.

### Why not 33x

33x implies a ~3% withdrawal rate — the ultra-conservative, large-legacy, "never touch the principal" posture. That's the right multiple if your goal were wealth preservation or a substantial bequest. But your guaranteed income already covers most baseline expenses, which means your portfolio isn't your survival mechanism. You don't need the insurance that 33x buys. Over-saving to 33x would likely mean **dying with far more than intended** — the classic underspending trap — and sacrificing utility in your high-energy years to protect a balance sheet that didn't need protecting.

### Why 25x works for you

Your situation has a structure that makes 25x both safe and rational:

Factor	What it means for your multiple
Guaranteed income covers baseline	Portfolio withdrawals are <b>discretionary</b> , not survival-critical. Lower floor risk.

Factor	What it means for your multiple
Legacy goal (not zero)	You want terminal value — but modest, not maximized. 25x with 4% leaves residual wealth in most historical scenarios.
90+ planning horizon	Needs a rate low enough to survive sequence risk over 25–30 years. 4% / 25x passes this test historically.
Balanced goal	25x sits precisely at the balance point between the consumption-maximizing 20x and the preservation-maximizing 33x.

## The Practical Refinement

Since your guaranteed income handles baseline, think of your portfolio in **two layers**:

**Layer 1 — Lifestyle enhancement spending** (travel, experiences, gifts, health optimization)

Draw from portfolio freely in your 60s and early 70s — your high-utility window. This is where the marginal utility of money is highest.

**Layer 2 — Buffer and legacy capital**

Let the remainder compound. What's left at 80–85 becomes your legacy pool and late-life care reserve.

This two-layer mental model means you don't need to be rigid about a single withdrawal rate. You spend more when utility is high, less when it naturally declines — which is also what the spending data on actual retirees shows happens organically.

## Bottom line

**25x is your number.** It's not a compromise — it's the mathematically and behaviorally correct answer for someone with guaranteed baseline income, a conservative longevity horizon, and a modest legacy intention. The guaranteed income is doing the heavy lifting on survival risk, which frees the portfolio to serve utility rather than just security.