17 Liking Vs Wanting Supernormal Stimuli

1. Liking vs Wanting: Concepts and Their Divergence

Basic Distinction

- Liking
  - Subjective pleasure, enjoyment, hedonic feeling.
  - "How good it feels" when you do/consume something.
  - Often conscious and reportable: "I enjoy this," "this tastes good."
- Wanting
  - Motivation, urge, inclination to pursue or consume something.
  - Can operate without conscious reflection: craving, compulsion.
  - May persist even when you know you no longer enjoy the thing or judge it bad for you.

Key Point:
They are conceptually distinct. It is logically possible, and empirically common, for wanting and liking to come apart.

Ways They Diverge

1. False Beliefs About Enjoyment
   - You believe you like something (e.g., a prestigious job, social media use) because of habit, social expectations, or status.
   - On honest reflection, you realize you don't actually enjoy it very much.
   - Your beliefs about liking can misalign with your actual experience of liking.
2. Wanting Without Liking
   - You have a strong urge to do X but:
     - X is not particularly pleasurable anymore, or
     - You might even find X aversive or empty.
   - Typical in addiction and compulsive behaviors.
3. Liking Without Wanting
   - You enjoy something when you do it, but don't feel strong urges beforehand.
   - Example: You truly enjoy a quiet walk, reading, or visiting friends, but you rarely feel a powerful "pull" to initiate it compared with checking your phone.

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2. Neuroscience of Wanting vs Liking

Distinct Brain Systems

Current best-supported theories in neuroscience (especially “incentive salience” theory) hold:

- Wanting system
  - Centers: mesolimbic dopamine system, particularly:
    - Ventral tegmental area (VTA)
    - Nucleus accumbens (core)
    - Projections to prefrontal cortex and other limbic areas.
  - Key neurotransmitter: dopamine.
  - Function: tags stimuli and cues as “important” or “motivationally salient,” generating cravings and pursuit, not pleasure itself.
- Liking system
  - Centers: small “hedonic hotspots”:
    - Parts of the nucleus accumbens shell
    - Ventral pallidum
    - Other regions in brainstem and limbic system.
  - Neurochemicals: opioids, endocannabinoids, and certain GABA processes.
  - Function: generate pleasurable feelings and hedonic “liking” reactions.

Evidence of Dissociation

- Animals can be manipulated so dopamine (wanting) is boosted while hedonic hotspots are unchanged:
  - They work harder for a reward (more wanting), but facial expressions of pleasure (liking) do not increase.
- Conversely, stimulating hedonic hotspots can increase liking reactions without creating strong motivated pursuit.

Conclusion:
Motivation (wanting) and pleasure (liking) are realized in partially separate brain systems, using different circuits and neurotransmitters.

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3. Drug Addiction as Misalignment of Wanting and Liking

What Happens in Addiction?

1. Sensitization of the Wanting System
   - Repeated drug use causes sensitization of mesolimbic dopamine pathways.
   - Environmental cues associated with the drug (places, people, paraphernalia) come to trigger intense dopamine “spikes”.
   - Result: extremely strong cravings and urges when exposed to cues, even after long abstinence.
2. Tolerance and Reduced Liking
   - Over time, subjective pleasure (“high”) often decreases: the user no longer gets the same hedonic payoff.

- They may say: “I don’t even enjoy it anymore, but I can’t stop.”
- So:
  - Wanting (craving) can remain very high or increase.
  - Liking (pleasure) can stay constant or decline.

3. Neural Mechanism of Misalignment
   - Wanting: hyper-reactive dopamine system responds strongly to drug-related cues.
   - Liking: hedonic system adapts and may become less responsive; chronic use can disrupt normal hedonic function.
   - Thus the same behavior (taking the drug) is driven by a powerful motivation system that is no longer tracking actual pleasure.

Addiction Beyond Drugs

- Similar patterns can occur with:
  - Gambling (especially slot machines, online betting)
  - Junk food
  - Internet pornography
  - Certain video games
- Common features:
  - Strong cue-triggered urges.
  - Declining or plateaued enjoyment.
  - Persistence of use despite recognition of harm.

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4. Wanting vs Long-Term Well-Being and Values

Two levels of divergence:

1. Wanting vs Liking (momentary pleasure)
   - As above: we can crave things we no longer enjoy.
2. Wanting vs What We Value / Long-Term Well-Being
   - Even if we “like” something in the moment, we may judge that, over time, it makes our life worse (e.g., heavy social media use, binge-watching, junk food).
   - Philosophers like Harry Frankfurt emphasize:
     - We care not only about what we want, but also about “what we want to want” (our higher-order values).
   - The attention economy, as described by Jenny Odell and James Williams:
     - Uses persuasive design to keep us clicking, scrolling, and reacting.
     - Can undermine our capacity for reflection and self-regulation, making it harder “to want what we want to want.”
     - Leads to short-term engagement winning against long-term aims (meaningful work, relationships, political engagement, creativity).

Exam-Relevant Idea:
Misalignment can thus be: - Neural: wanting vs liking. - Normative: wanting vs what we judge good for us or truly value over the long term.

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5. Supernormal Stimuli: Definition and Core Idea

Definition

A supernormal stimulus is:

> An artificially exaggerated version of a natural stimulus that a species evolved to respond to, which triggers a stronger behavioral response than the natural, "normal" stimulus.

Key features:

- Exploits evolved preference mechanisms (for certain shapes, colors, tastes, etc.).
- Is more intense (bigger, brighter, sweeter, more frequent) than anything typically found in the original environment of the species.
- Can cause the animal to prefer the artificial stimulus over the natural one, even when that is maladaptive.

Why They Work

- Evolution shapes organisms to treat certain cues as reliable signs of fitness-relevant goods (food, mates, offspring).
- Supernormal stimuli mimic and amplify those cues.
- The evolved system "over-fires" in response: the animal wants it more than the thing that is actually good for survival or reproduction.

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6. Examples of Supernormal Stimuli in Non-Human Animals

Know at least three clear examples:

1. Birds Preferring Artificial "Eggs"
    - Some birds will prefer to sit on extra-large, more speckled, more colorful artificial eggs over their own natural eggs.
    - The exaggerated size/color pattern overstimulates their built-in preference for "healthy" eggs.
2. Herring Gull Chick Pecking Behavior
    - Naturally, chicks peck at the red spot on their parent's bill to get food.
    - In experiments, chicks peck even more at a simple stick with three bright red stripes than at the real bill.
    - The artificial cue is a supernormal version of the key visual feature (red contrast).
3. Male Butterflies with Artificial Females
    - Male butterflies can be attracted more strongly to larger, brighter cardboard models than to actual females.
    - Exaggeration of wing size and color intensity creates a supernormal sexual stimulus.
4. Geese and Oversized Egg-Shaped Objects (another common example)
    - Geese instinctively roll eggs back into their nest.
    - They will preferentially roll larger egg-shaped objects (e.g., a volleyball or fake oversized egg) over real eggs.
    - Again, bigger and more salient object triggers a stronger response.

Common Pattern:
In each case, the animal's instinctive response system treats an exaggerated cue as even more appealing than the real, fitness-supporting target.

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7. Human Supernormal Stimuli: Candidates and Analysis

General Idea

Modern technologies and industries create stimuli that:

- Are more intense, more concentrated, or more frequent than ancestral environments contained.
- Tap into evolved systems for:
  - Sugar, fat, and salt (food)
  - Sexual interest
  - Social approval and information
  - Novelty and uncertainty
- These can plausibly be seen as supernormal stimuli for humans.

For the exam, know at least two clear human examples and be able to:

- Argue why they count as supernormal.
- Discuss whether they involve:
  - Wanting vs liking divergence.
  - Urges that damage long-term well-being or values.

Example 1: Highly Processed "Junk" Food

Why it's a supernormal stimulus

- Our ancestors evolved in environments with scarce sugar and fat.
- Natural foods: moderate sweetness, fat, and salt.
- Modern processed foods are:
  - Extremely high in sugar, refined carbohydrates, fat, and salt.
  - Engineered for hyper-palatability (taste, texture, mouthfeel).
- Result: They present a supernormal version of the cues that once reliably signaled high-value calories.

Wanting vs Liking

- Wanting:
  - Strong cravings, especially in response to cues (smells, packaging, ads).
  - Dopamine response to sugar/fat and cues can sensitize with repeated consumption.
- Liking:
  - Initial consumption is pleasurable.
  - Over time, people often report diminishing enjoyment and even feeling sluggish or guilty, yet they continue to eat.
- So we can see:

  - Wanting may remain high or increase (craving).
  - Liking can plateau or decrease.

Effect on Long-Term Well-Being

- Frequent consumption is linked to:
  - Obesity, diabetes, heart disease.
  - Lower energy and health, possibly reduced mood.
- Thus, indulging the urge can reduce overall well-being, despite short-term pleasure and strong motivation.

Example 2: Social Media and the Attention Economy

Why it's a supernormal stimulus

- Humans evolved to care deeply about:
  - Social approval, reputation, group inclusion.
  - New information about threats and opportunities.
- Social media platforms (as described by Jenny Odell and others):
  - Provide continuous, rapid, quantified feedback (likes, comments, follower counts).
  - Use persuasive design: notification badges, red icons, intermittent variable rewards, infinite scroll.
  - Expose us to constant novelty, outrage-provoking news, and emotional content.
- This is a supernormal environment compared with the slow, small-scale social interactions of ancestral life:
  - Many more "social signals" per minute than we evolved for.
  - Amplified emotional triggers (fear, anger, envy, desire).

Wanting vs Liking

- Wanting:
  - Compulsive checking behaviors, especially upon seeing notifications or feeling bored or anxious.
  - Strong urge to refresh feeds, respond to notifications, and chase "engagement."
- Liking:
  - People often report:
    - Brief hits of satisfaction when receiving likes or messages.
    - Overall feelings of stress, anxiety, distraction, envy, or emptiness after extended use.
- A user can feel:
  - "I keep reaching for my phone, but I don't even like what I'm seeing."
  - This is a classic wanting **>** liking pattern.

Effect on Long-Term Well-Being and Values

- As James Williams notes, persistent distraction can:
  - Prevent us from "living the lives we want to live."
  - Undermine capacities for reflection and self-regulation, making it harder to "want what we want to want."
- As Odell emphasizes:

  - The attention economy can trap people in waves of hysteria, fear, and outrage, generating anxiety while making it hard to think clearly or act effectively.
- Long-term costs can include:
  - Reduced ability to concentrate.
  - Neglect of meaningful relationships and projects.
  - Distorted sense of reality and values.
- So social media can be:
  - A supernormal social stimulus (exaggerated friendship/attention/novelty).
  - A case where we frequently want to engage, often don't deeply like the experience, and harm long-term well-being and autonomy.

Example 3: Internet Pornography

Why it's a supernormal stimulus

- Humans evolved sexual interest for:
  - Real partners, with limited variety and frequency.
- Internet pornography:
  - Offers endless variety of bodies and scenarios (novelty).
  - Extremely convenient, available on demand.
  - Intensifies visual and sexual cues beyond what is typical in ordinary life.
- This creates a supernormal sexual environment, far beyond ancestral conditions.

Wanting vs Liking

- Wanting:
  - Strong urges or compulsive use, especially with certain cues (boredom, stress, loneliness).
- Liking:
  - Pleasure during use, but some report:
    * Diminished satisfaction over time.
    * Desensitization to normal sexual interaction.
    * Feelings of emptiness or shame afterward.
- Thus, as with drugs, we can see rising or stable wanting with declining liking.

Effect on Long-Term Well-Being

- Potential consequences:
  - Interference with real-life intimacy.
  - Unrealistic expectations about sex and bodies.
  - In some cases, decreased motivation for relationships and other life projects.
- Again, urges can lead to behavior that undermines valued aspects of life and relationships.

Example 4: Gambling and Slot Machines (Optional Additional Example)

- Slot machines and online gambling use:
  - Intermittent variable rewards (like the notification schedule on social media).

  - Bright colors, sounds, near-misses: all designed to exaggerate reward cues.
- This creates a supernormal reward environment for systems evolved for occasional, natural wins.
- Clear case of:
  - Strong dopamine-driven wanting.
  - Liking that often declines.
  - Severe long-term harm (financial ruin, stress, social damage).

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8. Supernormal Stimuli and Wanting–Liking Divergence in Humans

Do Supernormal Stimuli Create Wanting–Liking Divergences?

Often, yes:

- By over-activating our motivational systems (dopamine and related circuitry), they:
  - Increase wanting and cue-triggered urges.
- But because of:
  - Tolerance.
  - Desensitization.
  - Conflicts with our values and self-image.
- They often do not increase liking indefinitely and may even decrease the real enjoyment or meaning of the activity.

Do They Reduce Long-Term Well-Being or Other Values?

Common patterns across human cases:

- Short-term:
  - Intense motivation and quick gratifications.
- Long-term:
  - Health problems (junk food).
  - Attention fragmentation and anxiety (social media).
  - Relationship and sexual difficulties (porn).
  - Financial and psychological damage (gambling).

These are paradigmatic cases of:

1. Wanting > Liking
   We pursue something more than we actually enjoy it.
2. Wanting vs What We Value
   Our immediate urges conflict with:
   - Our long-term interests.
   - Our reflective judgments about the kind of life we want to live.

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9. How to Use These Ideas in an Exam Answer

When asked about these topics, be sure you can:

1. Define and distinguish liking vs wanting
    - Liking = pleasure; wanting = motivation/urge.
    - Explain that they are conceptually distinct and can diverge.
2. Describe the neuroscientific basis
    - Wanting: mesolimbic dopamine system.
    - Liking: hedonic hotspots with opioids/endocannabinoids.
    - Emphasize different circuits and neurochemicals.
3. Explain addiction through this lens
    - Sensitized wanting system; tolerance in liking.
    - Addict may strongly want a drug they no longer enjoy and judge as bad.
4. Define supernormal stimulus
    - Artificially exaggerated natural cue causing stronger response than the natural stimulus.
    - Explain why evolution makes us vulnerable to these.
5. Give at least three animal examples
    - Birds preferring large/artificial eggs.
    - Herring gull chicks preferring a red-striped stick.
    - Male butterflies preferring larger/brighter models.
    - (Optionally: geese and oversized egg-shaped objects.)
6. Give at least two human examples and analyze
    - Junk food, social media, porn, gambling.
    - For each: say why it is supernormal; discuss wanting vs liking; discuss impact on long-term well-being and values.
7. Connect to the attention economy readings
    - Persuasive design as engineering supernormal stimuli for attention.
    - Connection to James Williams' point about undermining our ability to "want what we want to want."
    - Odell's emphasis on the need to withdraw or resist in order to regain meaningful, self-directed attention.

These elements together will let you answer questions about:

- The difference between wanting and liking in neuroscience.
- How this explains addiction.
- What supernormal stimuli are in animals and humans.
- How they can produce both neural misalignments (wanting vs liking) and normative misalignments (urge vs long-term well-being and values).