



- # Vagueness and the Sorites Paradox

# 1 November, 2006

# Heaps

1 grain of sand is not a heap.

If 1 grain of sand is not a heap,  
then 2 grains of sand is not a heap.

If 2 grains of sand is not a heap,  
then 3 grains of sand is not a heap.

# Heaps

....

If 999,999 grains of sand is not a heap,  
then 1,000,000 grains of sand is not a heap.

So, 1,000,000 grains of sand is not a heap



# Baldness

....

If a man with 1 hair on his head is not bald, then  
a man with no hair on his head is not bald.

So, a man with no hair on his head is not bald.

# Options

- Accept conclusion
- False premise
- Invalid

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- 
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# Accept conclusion

No heaps!

No man is bald!



# Heaps

1,000,000 grains of sand is a heap.

If 1,000,000 grain of sand is a heap,  
then 999,999 grains of sand is a heap.

If 999,999 grains of sand is a heap,  
then 999,998 grains of sand is a heap.

# Heaps

....

If 1 grain of sand is a heap,  
then 0 grains of sand is a heap.

So, 0 grains of sand is a heap

# And so

heap, bald, chair, thin, obese, tall, tadpole, book,  
toy, happy, clever, few, cloudy, pearl, beard,  
game, adult, child, mountain, lake, hot, heavy

# Conclusion

No heaps, bald people, children, tables ...

# Options

- Accept conclusion
- False premise
- Invalid

# Readings

D. Hyde (2005), "Sorites Paradox", Stanford Encyclopedia of Philosophy

# Suggested Readings

B. Russell (1923), "Vagueness"

R. Keefe and P. Smith (1996), Introduction to  
*Vagueness: A Reader*.

# Heaps

1 grain of sand is not a heap.

If 1 grain of sand is not a heap,  
then 2 grains of sand is not a heap.

If 2 grains of sand is not a heap,  
then 3 grains of sand is not a heap.



# Heaps

....

If 999,999 grains of sand is not a heap,  
then 1,000,000 grains of sand is not a heap.

So, 1,000,000 grains of sand is not a heap

# Relax

No child should work

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- 
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# Relax

No child should work

Everyone is a child of someone

# Relax

No child should work

Everyone is a child of someone

No one should work

# Ambiguity

child

bank

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- 
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# Context sensitivity

Elia is tall.

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# Lack of specificity

It's somewhere around here.

Someone left a message.

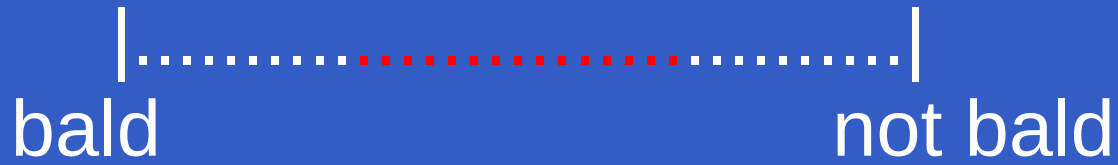
# Vagueness

That is a heap.

Smith is bald.



# Penumbra



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# Tolerance

Small differences don't matter

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- 
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# Three features

Penumbra

Tolerance

Sorites susceptibility

# Language

Ambiguity

Context sensitivity

Lack of specificity

Vagueness

# Vagueness is everywhere

heap, bald, chair, thin, obese, tall, tadpole, book,  
toy, happy, clever, few, cloudy, pearl, beard,  
game, adult, child, mountain, lake, hot, heavy...



# Options

- Accept conclusion
- False premise
- Invalid

- 
- 
- 

# A further option?

Forget about logic!



# Heaps

1 grain of sand is not a heap.

If 1 grain of sand is not a heap,  
then 2 grains of sand is not a heap.

If 2 grains of sand is not a heap,  
then 3 grains of sand is not a heap.

# Heaps

....

If 999,999 grains of sand is not a heap,  
then 1,000,000 grains of sand is not a heap.

So, 1,000,000 grains of sand is not a heap

# Nologic

Don't accept the conclusion.

Reject logic

# A defense

A murder occurred: Wednesday 12PM  
in the HKU library.

You are accused!

# You say

I was in Philosophy class at 12 in the Main Building.

I can't be in two places at once.

So I was not in the library at 12.

But the murder could only have been committed by someone who was in Library at 12.

Therefore I did not commit the murder.

# The nologic police reply

You were not in the library at 12.

The murder could only have been committed by someone who was in Library at 12.

# The nologic police reply

You were not in the library at 12.

The murder could only have been committed by someone who was in Library at 12.

But you still did it.

# Reason

Reasoning and logic are important.



# Nologic

Don't accept the conclusion?

Reject logic? No.