

SKULLS, GOTHIC FUTURES, AND THE WEIGHT OF IRON: VISUAL AESTHETICS AND DESIGN IN WARHAMMER 40,000

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OR: WHY WARHAMMER 40K LOOKS THE WAY IT DOES IN 2025

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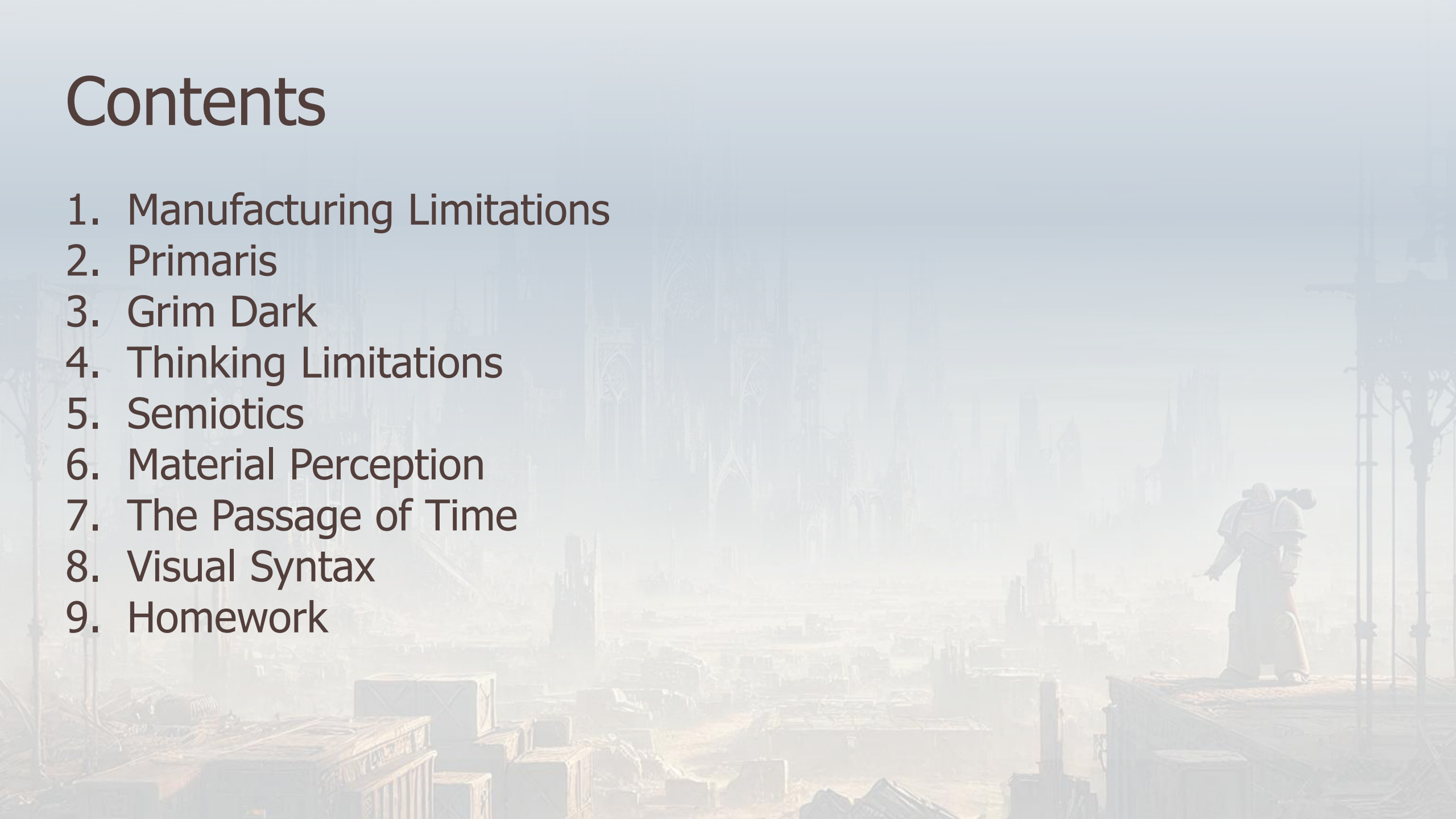
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Manufacturing Limitations

1st: 1987 – single part lead / pewter, some simple plastic

Metal (lead / white metal / material matrix)

Single part / Simple part models

Low details – Gravity Fed



Manufacturing Limitations

1st: 1987 – single part lead / pewter, some simple plastic

Early Plastic (Polystyrene)
Low Fidelity Sculpt



Psychostyrene Dwarfs – 1985



Drastik Plastik Orks - 1986

Manufacturing Limitations

1st: 1987 – single part lead / pewter, some simple plastic

2nd: 1993 – introduction of blended matrix metal body / plastic arms



Manufacturing Limitations

- 1st: 1987 – single part lead / pewter, some simple plastic
- 2nd: 1993 – introduction of blended matrix metal body / plastic arms
- 3rd: 1998 – multipart plastic kits / introduction of digital sculpts
- 4th: 2004 – first complete digital sculpt (Carnifex)

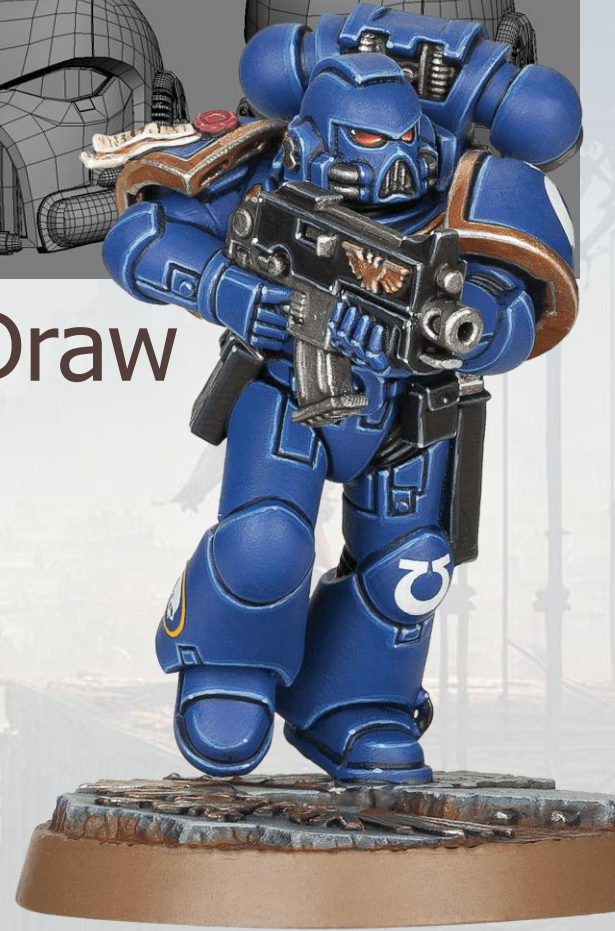
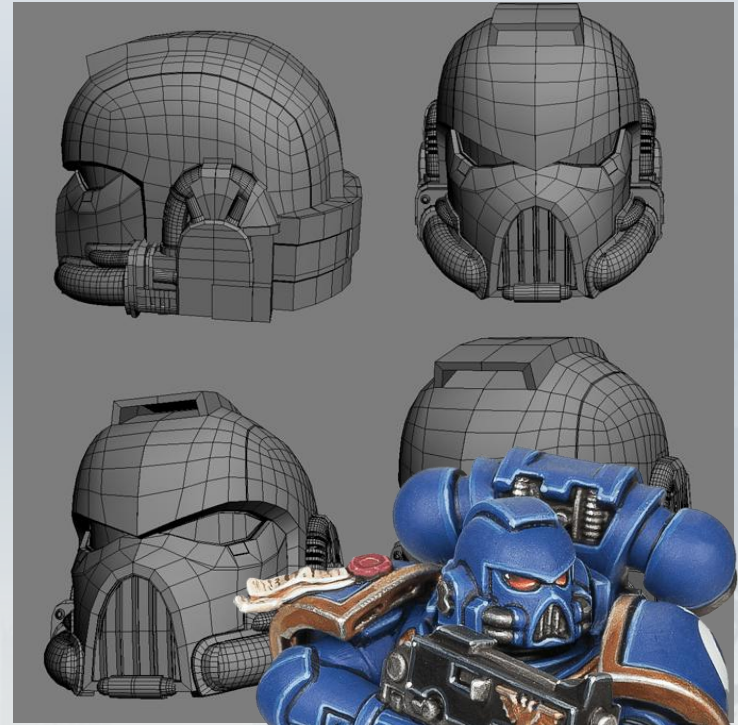


NOTE!

Drawing What They Could Make



Making What They Could Draw



Manufacturing Limitations

1st: 1987 – single part lead / pewter, some simple plastic

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4th: 2004 – first complete digital sculpt (Carnifex)

5th: 2008 – Finecast replaces metal

Finecast –

Polyurethane Resin

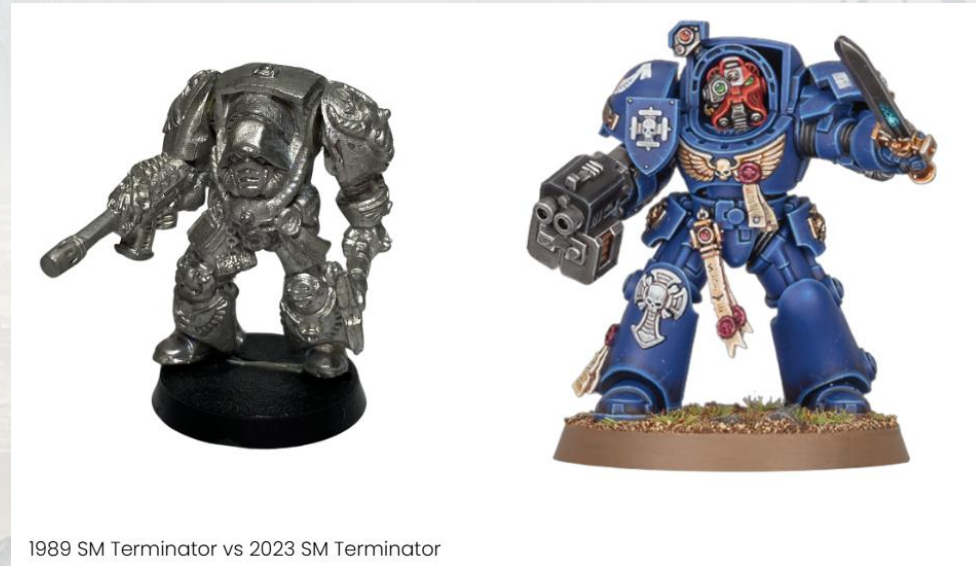
Reuse of white metal moulds:



Manufacturing Limitations

- 1st: 1987 – single part lead / pewter, some simple plastic
- 2nd: 1993 – introduction of blended matrix metal body / plastic arms
- 3rd: 1998 – multipart plastic kits / introduction of digital sculpts
- 4th: 2004 – first complete digital sculpt (Carnifex)
- 5th: 2008 – Finecast replaces metal
- 6th: 2012 – introduction of push fit
- 8th: 2017 – introduction of Primaris scale

Drawing on a bigger canvas



1989 SM Terminator vs 2023 SM Terminator

Primaris



Grim Dark?



1st 1987



2nd 1993



3rd 1998



4th 2004



5th 2008



6th 2012



7th 2014



8th 2017



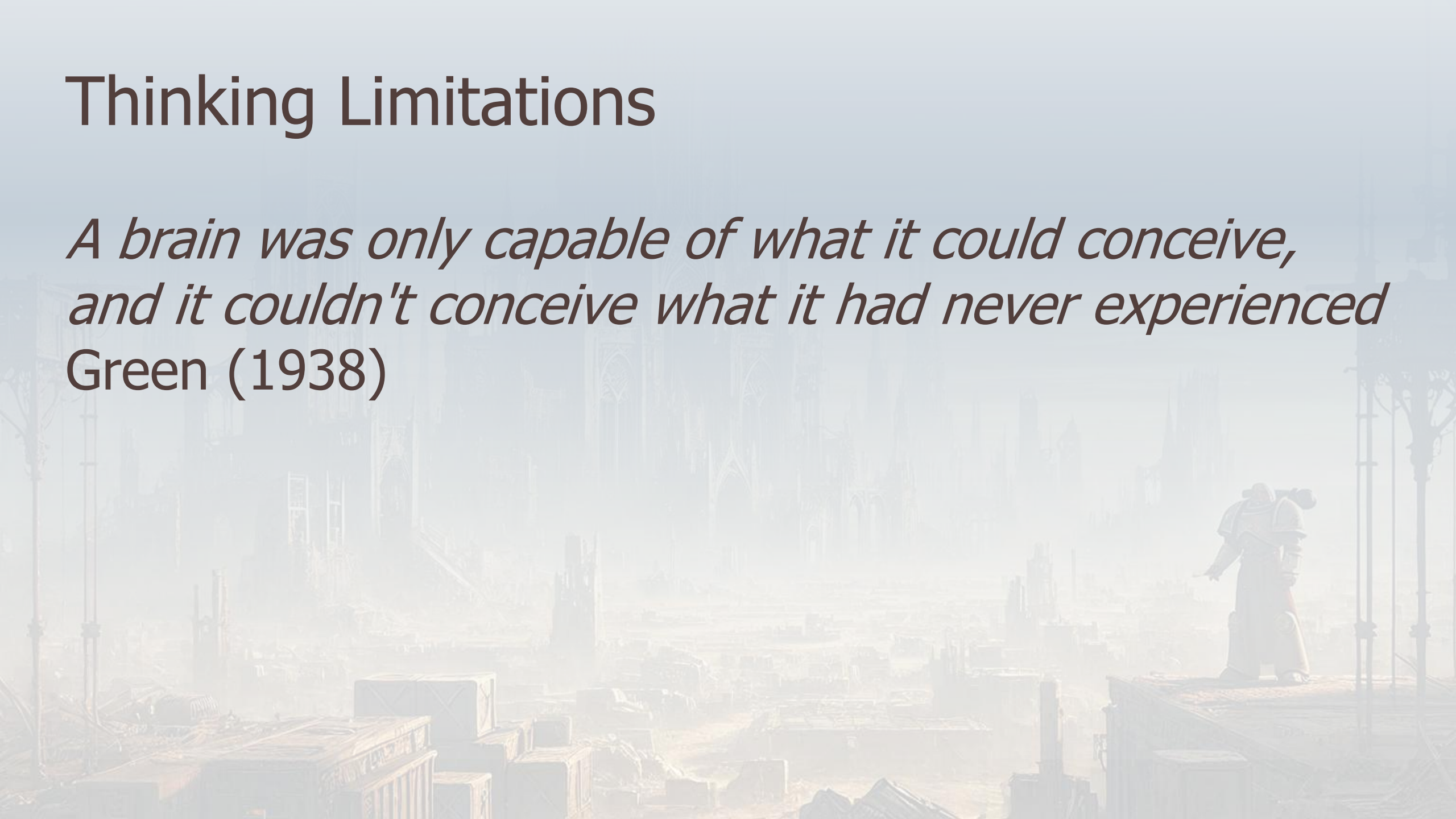
9th 2021



10th 2023

Thinking Limitations

*A brain was only capable of what it could conceive,
and it couldn't conceive what it had never experienced*
Green (1938)



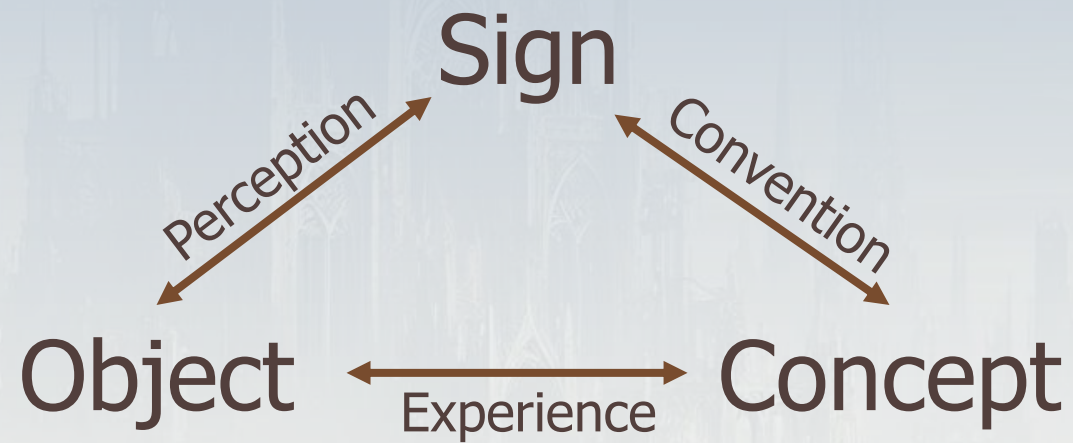
Thinking Limitations

*A brain was only capable of
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Semiotic Triangle

“Silent Language”



Semiotic Triangle

"Silent Language"



Sign

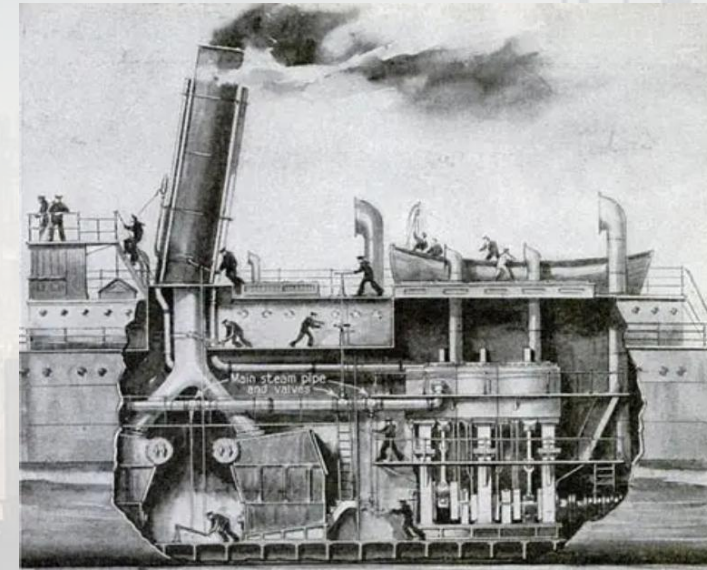
Perception

Convention

Object

Experience

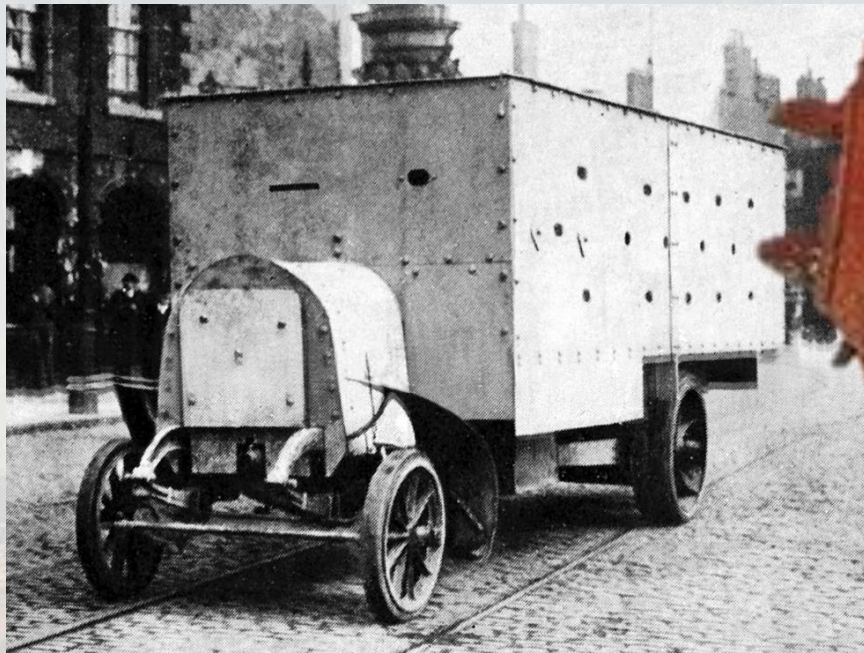
Concept



Material Perception

"Affordances"

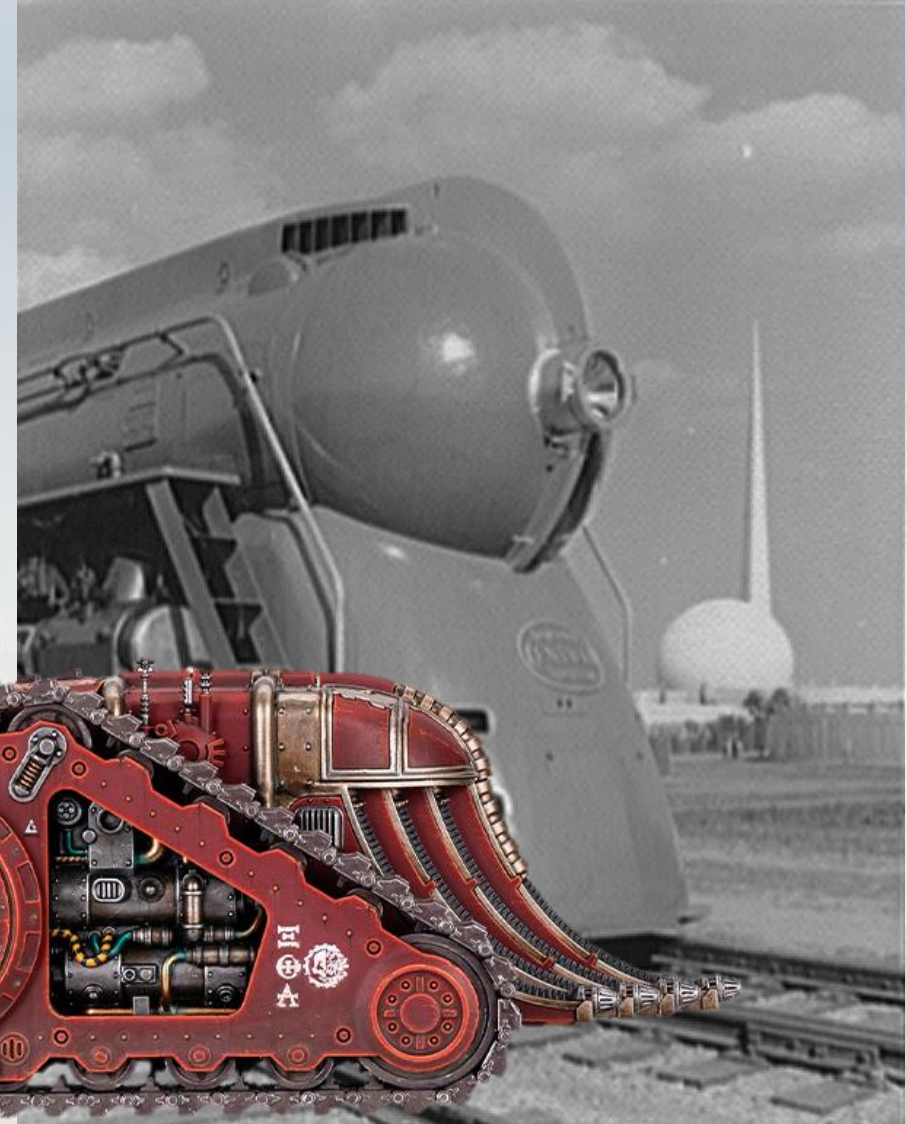
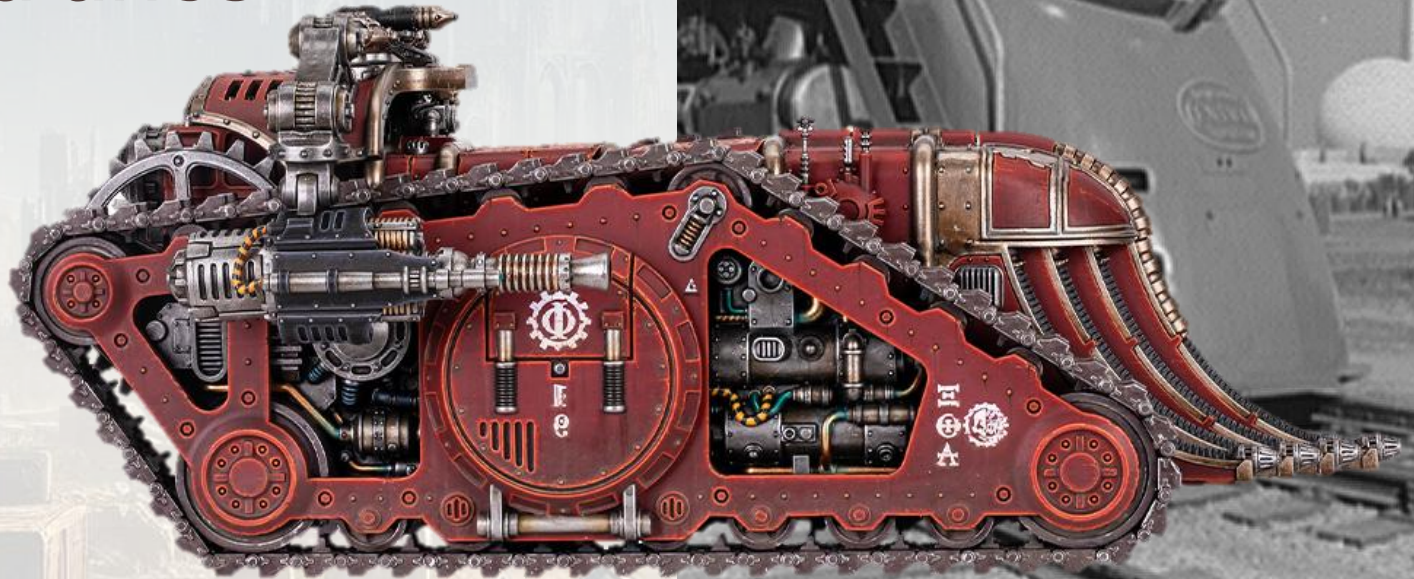
Schmidt et al, (2025)



The Passage of Time

30k to 40k: Art Deco / Streamlined

Geometric
Symmetry
Balance



The Passage of Time

Sky Captain



The Passage of Time

Ork Battle Wagon



1990

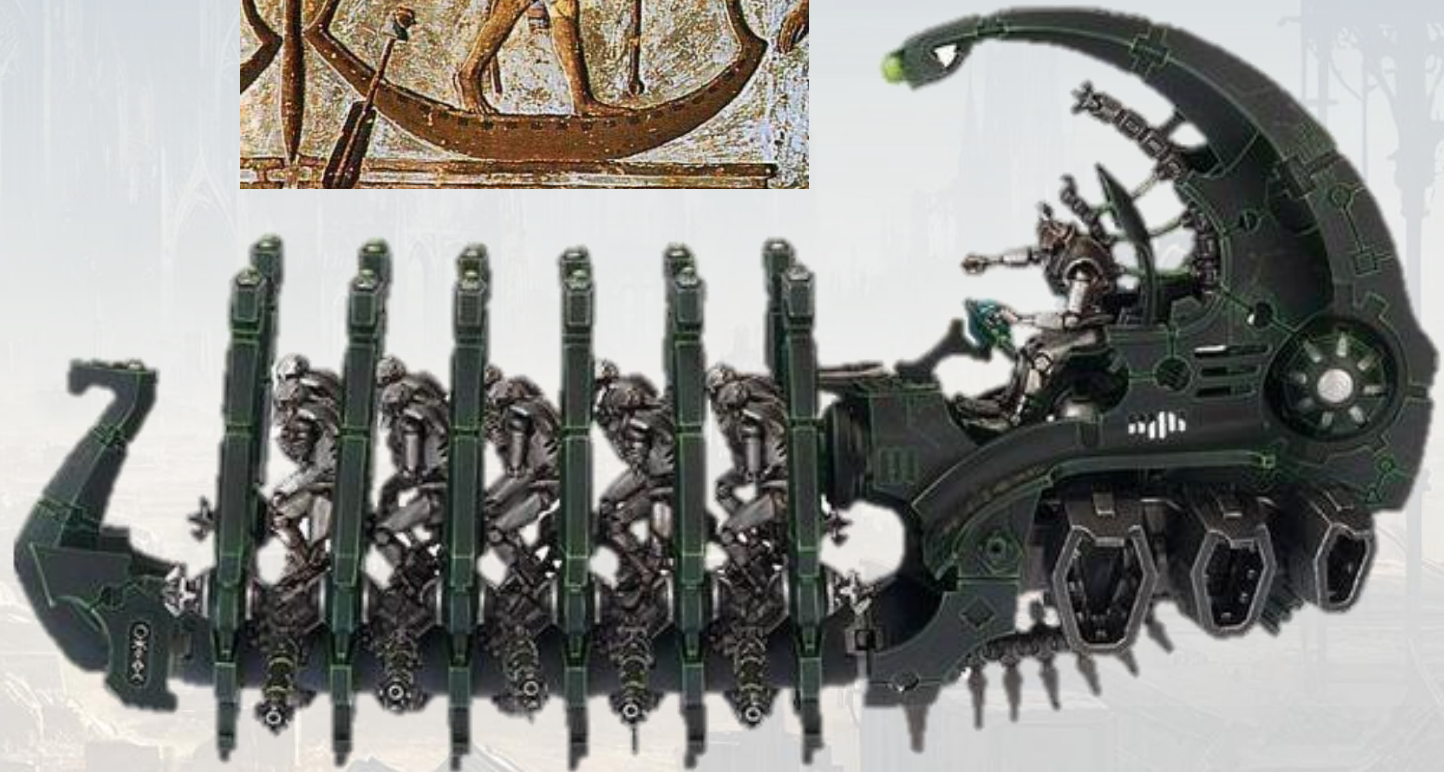
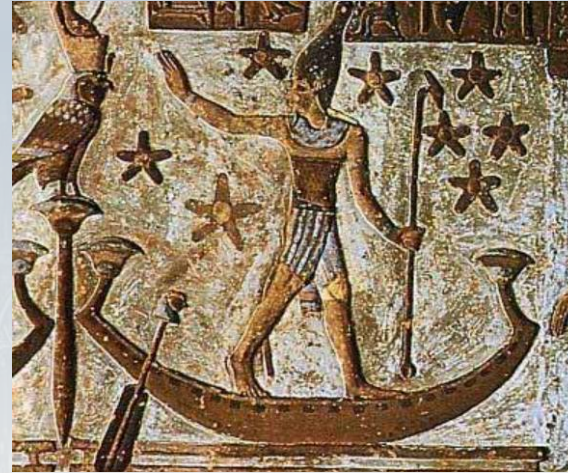


2021

The Passage of Time

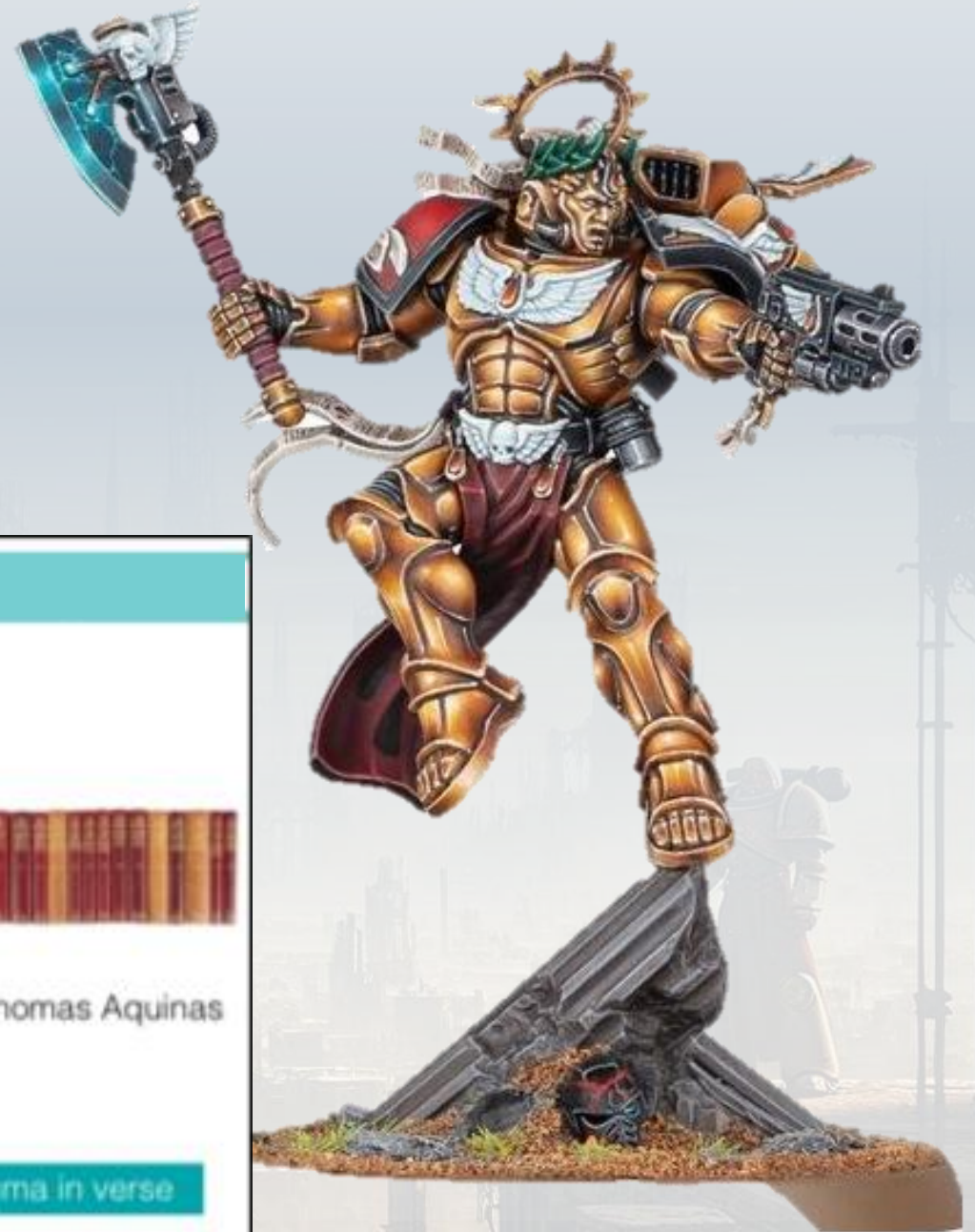
Necrons

Ancient Egypt
Scarab swarms



Visual Syntax

Gothic Marines
Medieval Symbolism



Visual Syntax

Gothic Marines
Medieval Symbolism



Visual Syntax

Chaos

Unbalanced

Assymetric

No numerical base



Visual Syntax

Tribal / Barbarian Orks

Found technology

Repurposed

Skulls / tusks / organic

Dystopian

Speed Freeks / Mad Max



Visual Syntax

T'AU

Brand new
Consumer product
No repairs



Homework

22 Factions
(counting
Space Marines
as one)

What critical
appraisal
can you do?



Thank you

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Slide Design – Adapted from OpenAI Dall-E

Hand Sculpt: <https://www.lsaoutlet.shop/?ggcid=3012062>

Zbrush: <https://www.creativebloq.com/professional-development/artistic-tips-techniques/zbrush-for-ipad-10-beginner-tips-to-get-started-in-mobile-3d-modelling>

Early Marine Art: <https://ar.inspiredpencil.com/pictures-2023/warhammer-40k-art>

Metal Marines: <https://www.ebay.co.uk/itm/166604951045>

Metal and Finecast: https://www.reddit.com/r/Warhammer40k/comments/aqhdqi/why_did_they_remove_metal_minis/

Pyschostyrene Dwarfs - <https://www.kowforum.com/t/my-abyssal-dwarfs/55?page=3>

Carnifex: <http://www.modernsynthesist.com/2012/03/tyranid-archive-4th-generation-2005.html>

Finecast - <https://www.youtube.com/watch?v=zU7TWQgG11A>

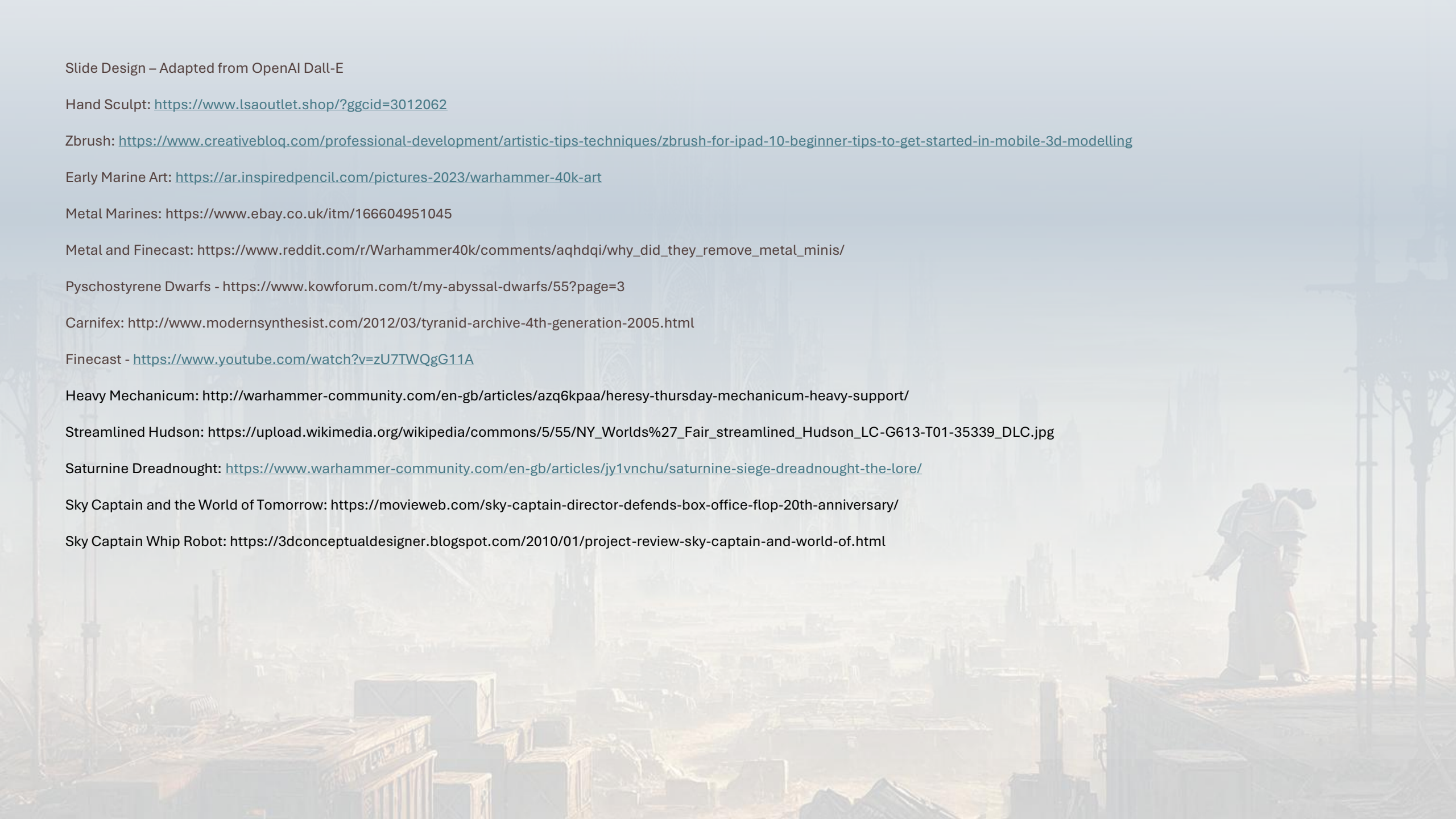
Heavy Mechanicum: <http://warhammer-community.com/en-gb/articles/azq6kpaa/heresy-thursday-mechanicum-heavy-support/>

Streamlined Hudson: https://upload.wikimedia.org/wikipedia/commons/5/55/NY_Worlds%27_Fair_streamlined_Hudson_LC-G613-T01-35339_DLC.jpg

Saturnine Dreadnought: <https://www.warhammer-community.com/en-gb/articles/jy1vnchu/saturnine-siege-dreadnought-the-lore/>

Sky Captain and the World of Tomorrow: <https://movieweb.com/sky-captain-director-defends-box-office-flop-20th-anniversary/>

Sky Captain Whip Robot: <https://3dconceptualdesigner.blogspot.com/2010/01/project-review-sky-captain-and-world-of.html>



Thanatar Calix: https://www.warhammer.com/en-GB/shop/mechanicum-thanatar-calix-siege-automata-2025?srsltid=AfmBOorPdd66OMZ2vWVHAZAqgt2LivmuKyaPPuROKaOi-LYfAlbilQ_J

Rogue Trader BattleWagon: <https://www.facebook.com/photo/?fbid=2758451900855941&set=pcb.2758453647522433>

Ork BattleWagon: https://www.warhammer.com/en-DK/shop/orks-battlewagon-2021?srsltid=AfmBOoq6iPUGKn9Ec6fKRDyaU9bgzl2CEOy1Kj_My-iy9_IUjXmWts6K

1989 SM Terminator vs 2023 SM Terminator - <https://www.somuchstuff.com.au/so-much-warhammer-intel/warhammer-evolution-part-2>

Plastic Marine Comparrison - <https://www.somuchstuff.com.au/so-much-warhammer-intel/warhammer-evolution-part-1>

F. Schmidt, M.N. Hebart, A.C. Schmid, & R.W. Fleming, Core dimensions of human material perception, Proc. Natl. Acad. Sci. U.S.A. 122 (10) e2417202122, <https://doi.org/10.1073/pnas.2417202122> (2025).

Ork Stompa: <https://www.warhammer.com/en-GB/shop/Ork-Stompa?queryID=57983857b21bfcac5fa21b11eb706a97>

Improvised Armour: [one-of-several-improvised-armoured-personnel-carriers-of-the-british-army-during-the-revolutionary-easter-rising-dublin-1916.jpg](#) (1957×1170)

Poxbringer: <https://www.warhammer.com/en-GB/shop/Poxbringer-Herald-Of-Nurgle-2018?queryID=9bcc97c26fa6ef3fac9c6a38ed451b32>

Sloppity Bilepiper: <https://www.warhammer.com/en-GB/shop/Sloppity-Bilepiper-Herald-Of-Nurgle-2018?queryID=3504225e9422bcb7dded0ea91b6b30e2>

Sly Marbo: <https://www.warhammer.com/en-GB/shop/Astra-Militarum-Sly-Marbo-2018?srsltid=AfmBOoosB4JgJe0vuL2DDDVj1tilmJSYiKKfQtYV4-UCqVPHvQ8ySxHR>

