

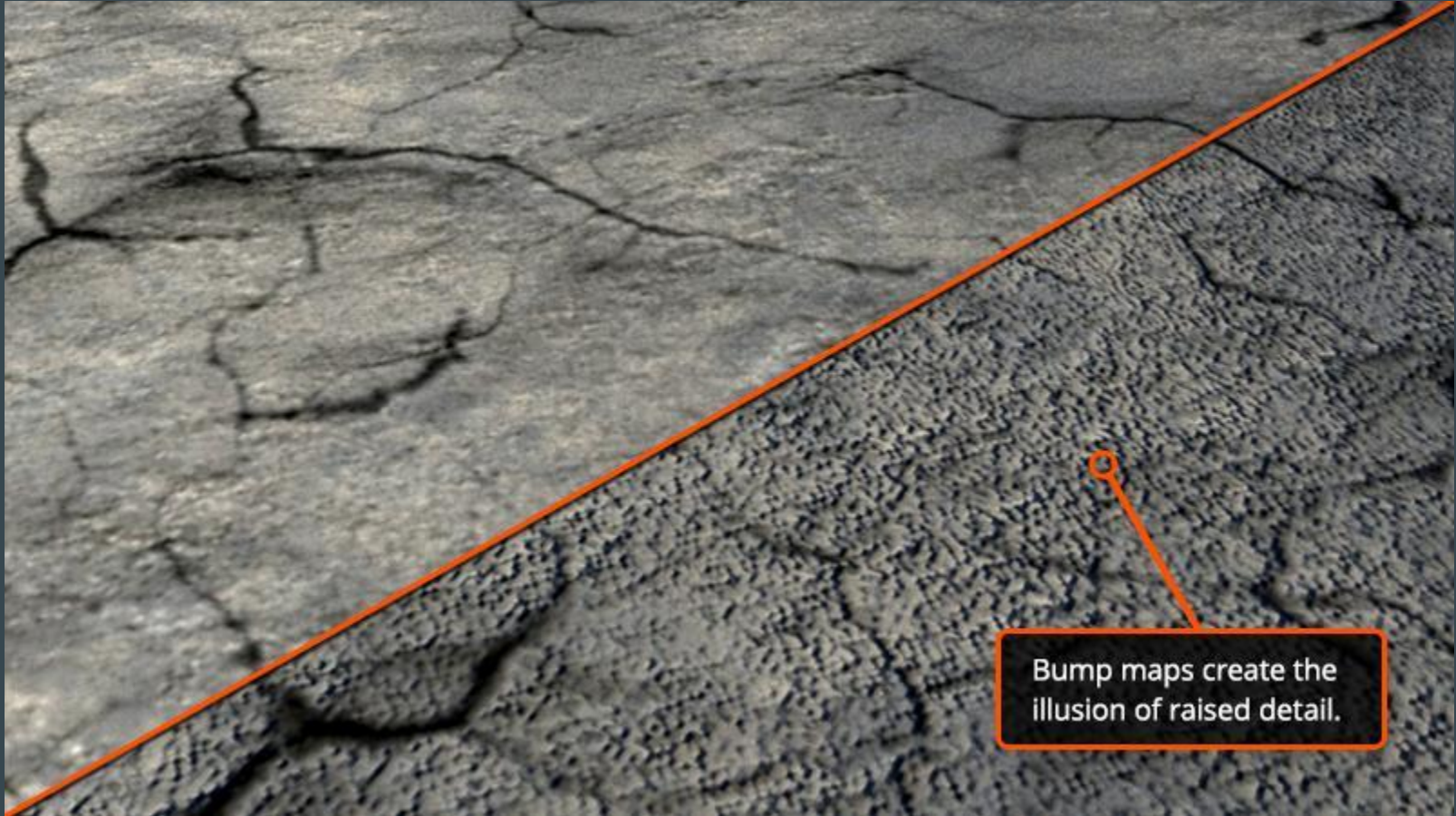


Bump Mapping

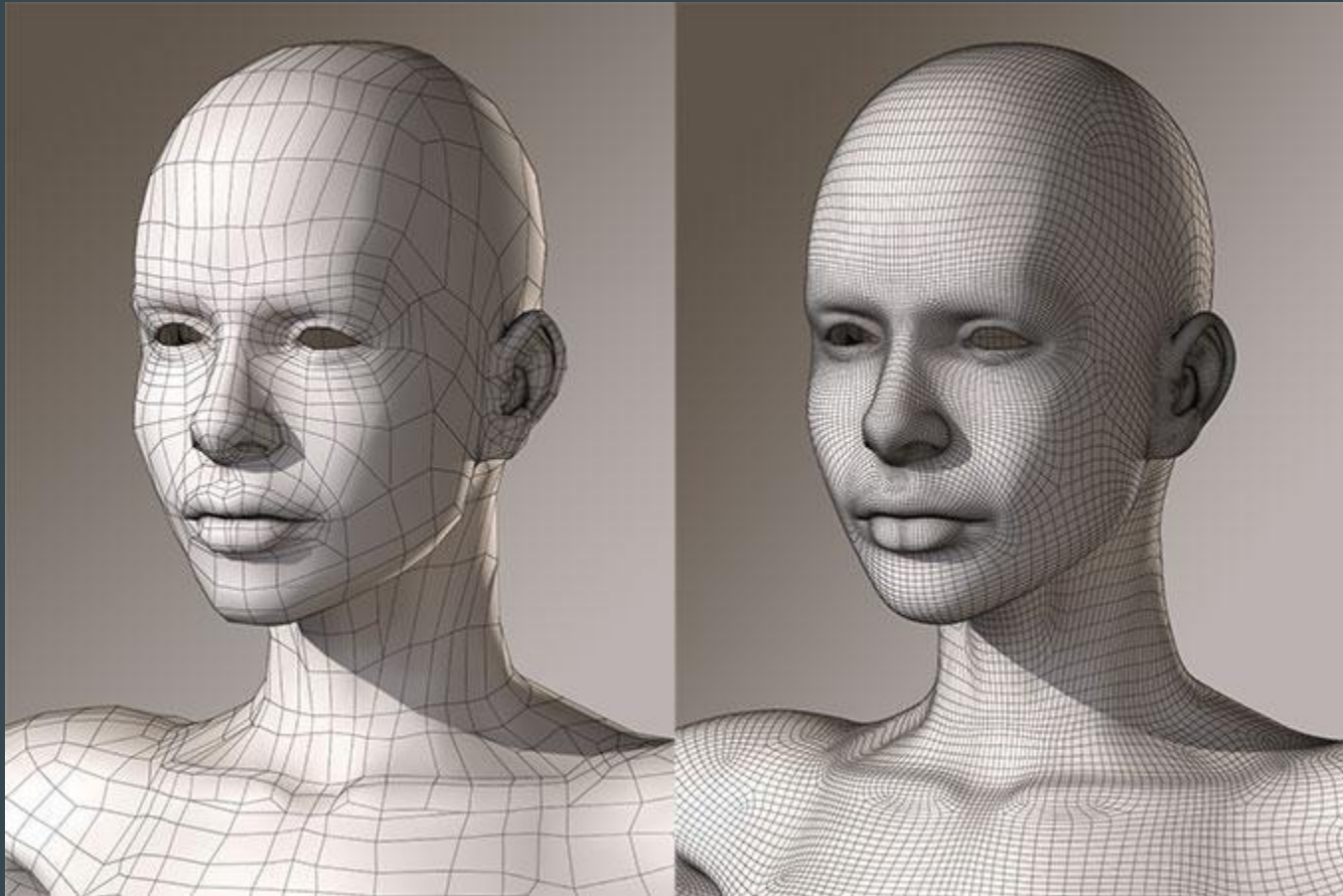
CAP 3027 Fall 2015

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Bump Mapping



Low Polygon vs High Polygon Count



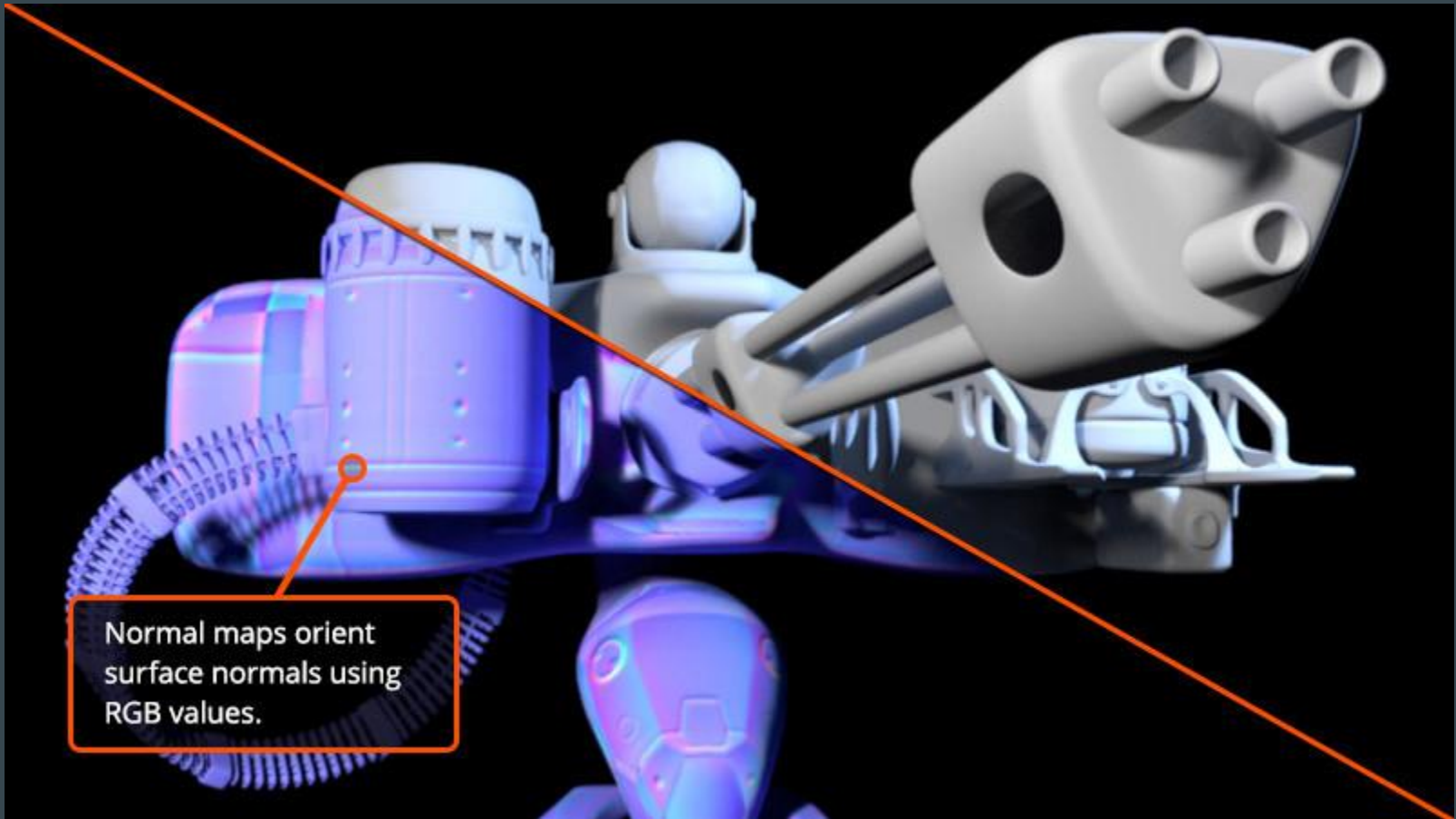
Without bump map

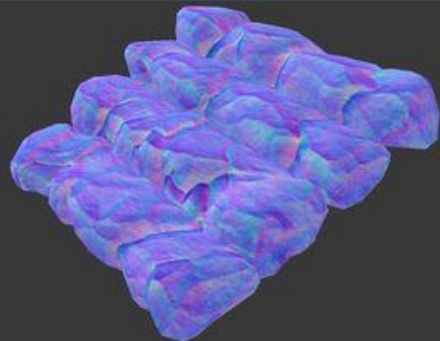
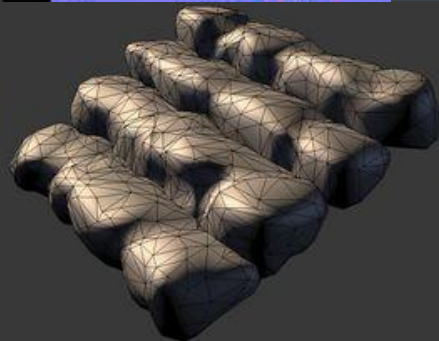
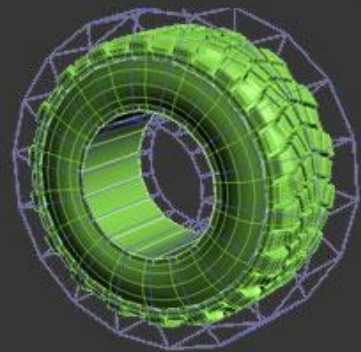
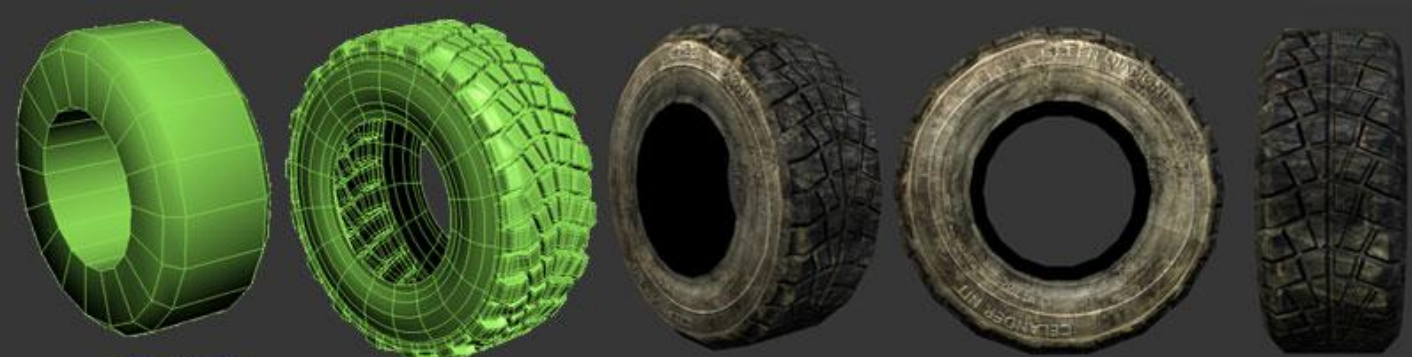


With bump map

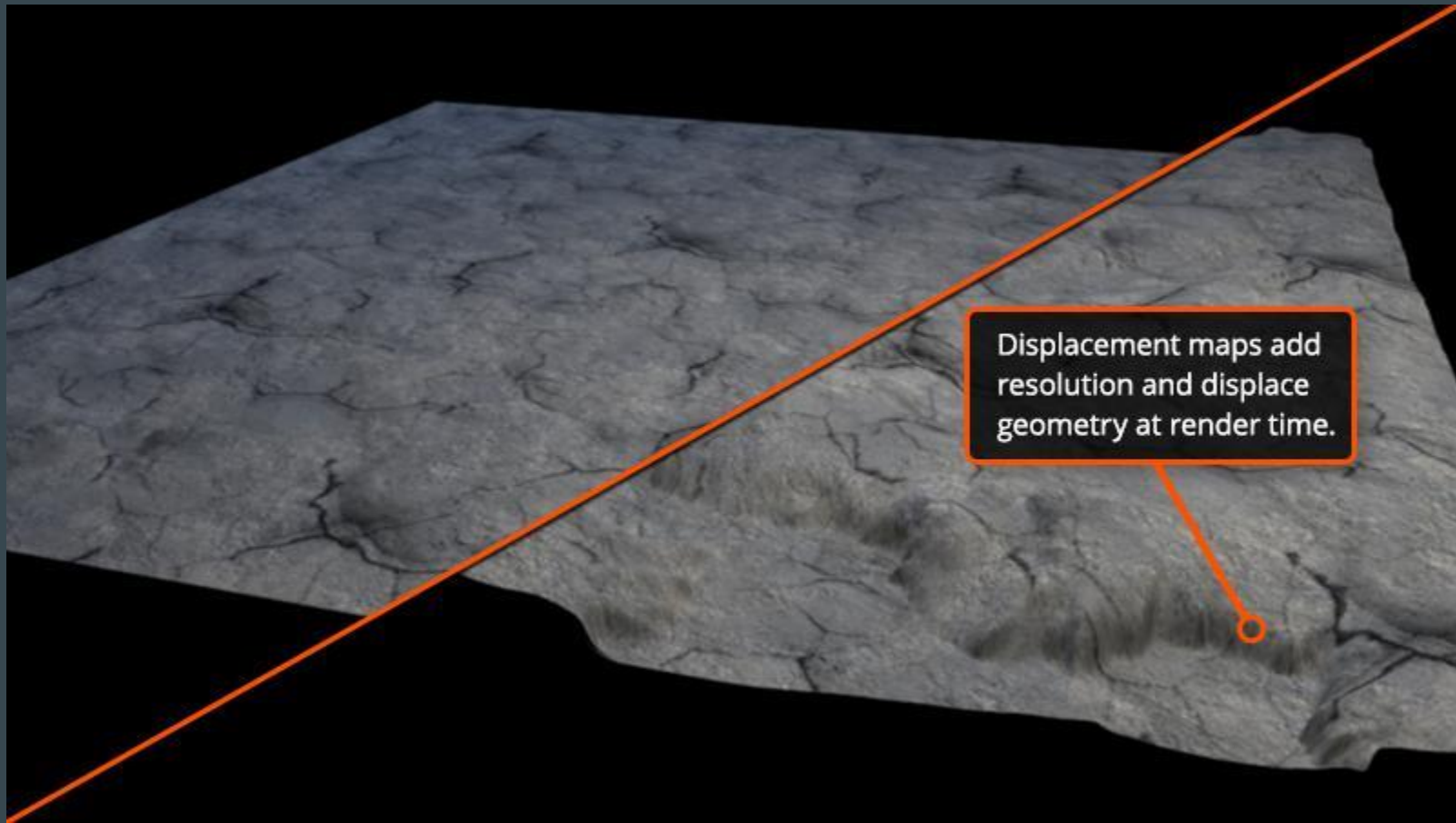


Normal Mapping

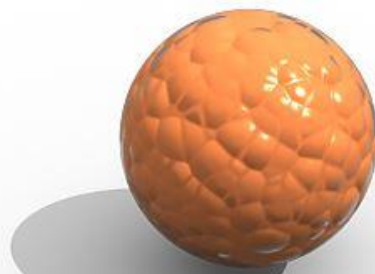




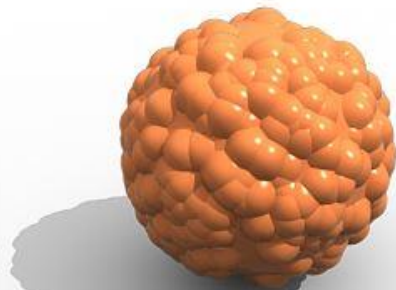
Displacement Mapping



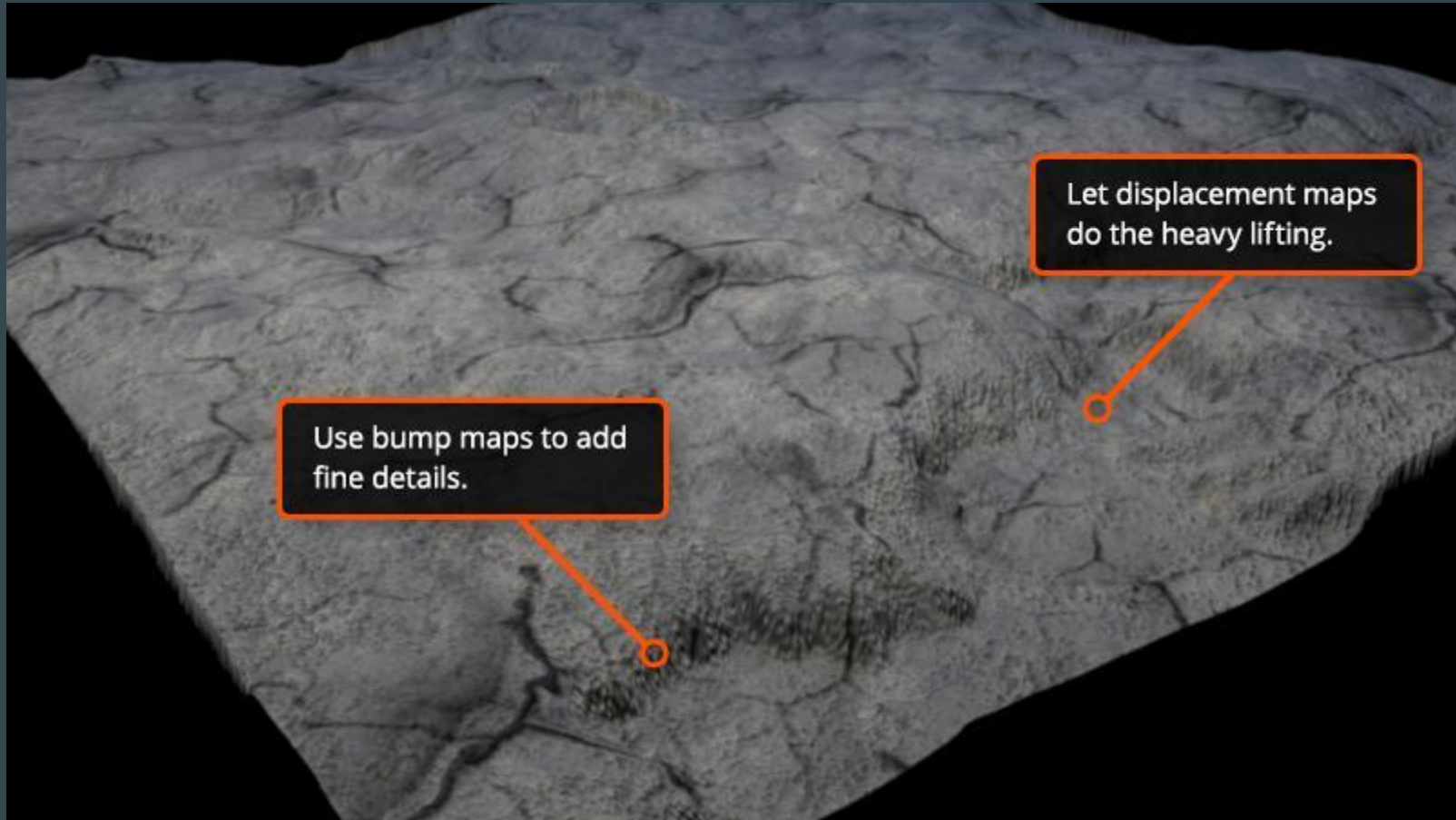
Displacement maps add resolution and displace geometry at render time.



Bump mapping



Displacement mapping



Use bump maps to add fine details.

Let displacement maps do the heavy lifting.

Relief Mapping



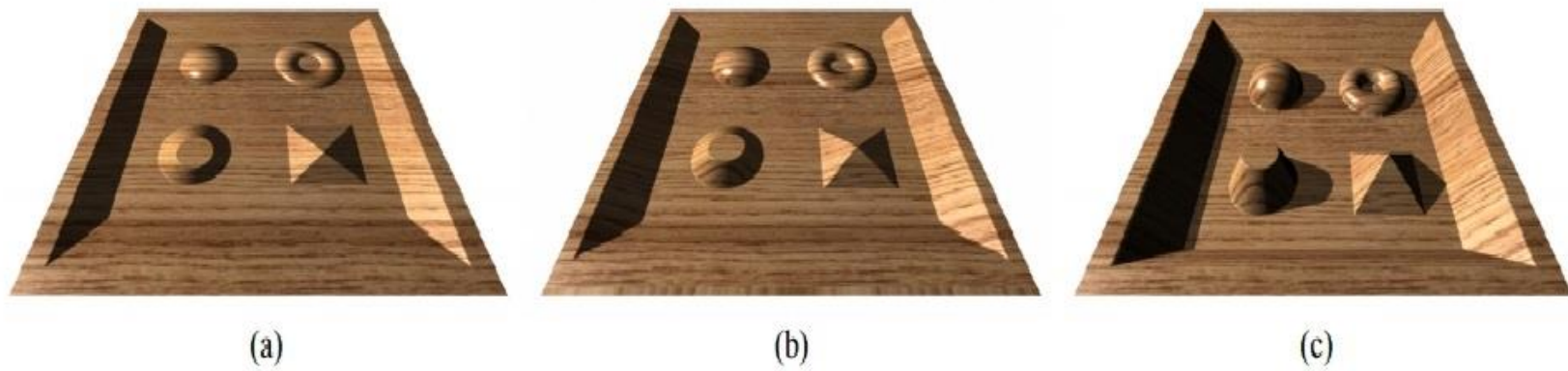


Figure 19: One polygon rendered from the same viewpoint using three different techniques: (a) Bump mapping, (b) Parallax mapping and (c)