

# Halftone & Screening

Art & Design

How continuous tone becomes ink dots, and where 300 ppi comes from.

A press prints solid ink or none at all. Tone is simulated by dots of varying size on a ruled screen, measured in lines per inch.

## RULE OF THUMB

$\text{ppi} \approx 2 \times \text{lpi}$

## COATED STOCK

150-175 lpi

- Newsprint about 85 lpi; coated stock 150-175 lpi.
- Fine art printing reaches 200 lpi and beyond.
- Image ppi should be roughly twice the line screen.
- That is where 300 ppi for 150 lpi comes from.
- Each ink is screened at a different angle.
- Wrong angles between screens produce moiré.

## LOOK FOR IT

Scanning an already-printed image re-screens it and makes moiré; descreen at the scanner instead.

Stochastic screening uses equal dots at random positions rather than a ruled grid, which removes moiré and holds more detail.