

- Towards Conceptual Compression
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I think this work just proposes an effect they observed about DRAW without attention. No much new stuffs are presented.

The idea is that, DRAW without attention seems to capture the latent factors in a hierarchical way. The first latent captures the identity of the digit, and following latents captures gradually lower level information. This is the key idea of "conceptual compression".

To preform lossy compression, we can then just store the first k latents. During decompression, we can fix the first k latents, and generate the following. That will give us a decompressed image.

The author does not seem to address why this will happen. But from an intuitive way, each modification w_i is generated from

- w_1 from z_1
- w_2 from z_1, z_2
- w_3 from z_1, z_2, z_3
- etc

It seems that earlier z_i 's will have a larger impact on the final input (more modifications are dependent on them). So it is natural that z_i will be contain more high level information.