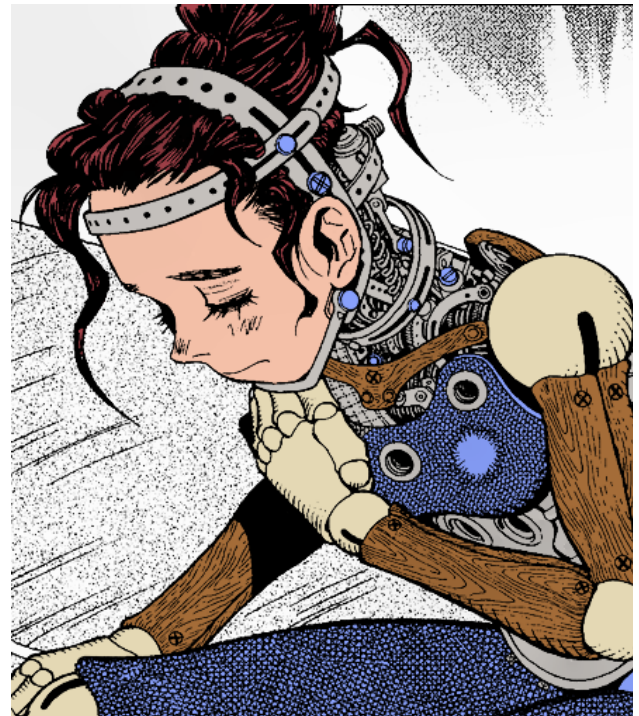
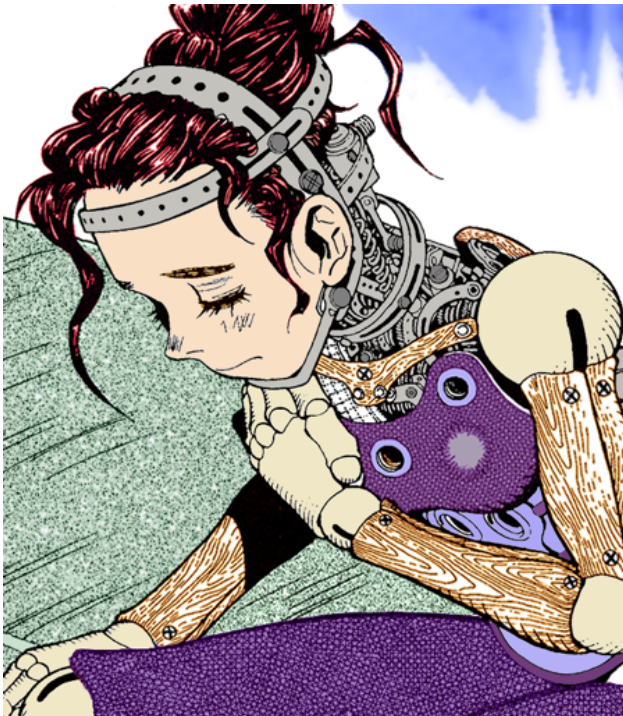
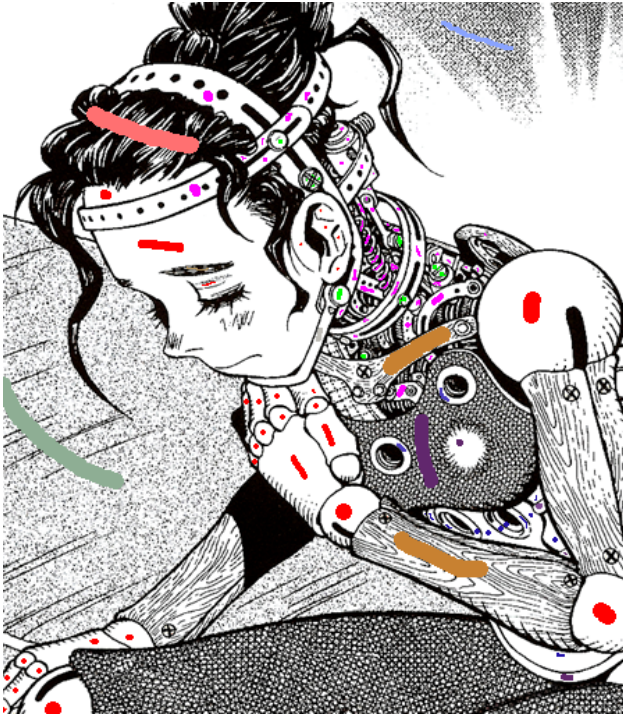
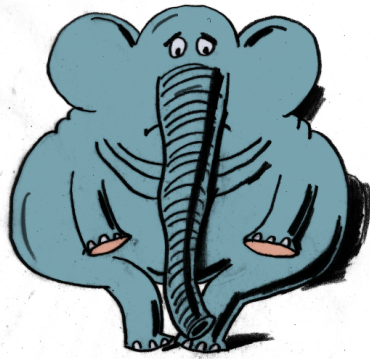
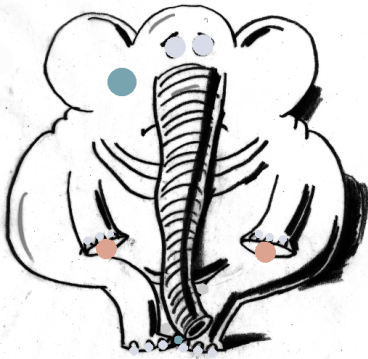


## Manga colorization vs. LazyBrush

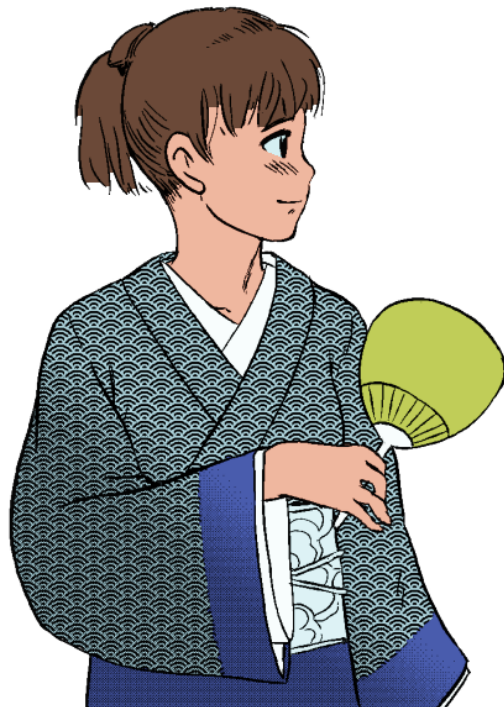
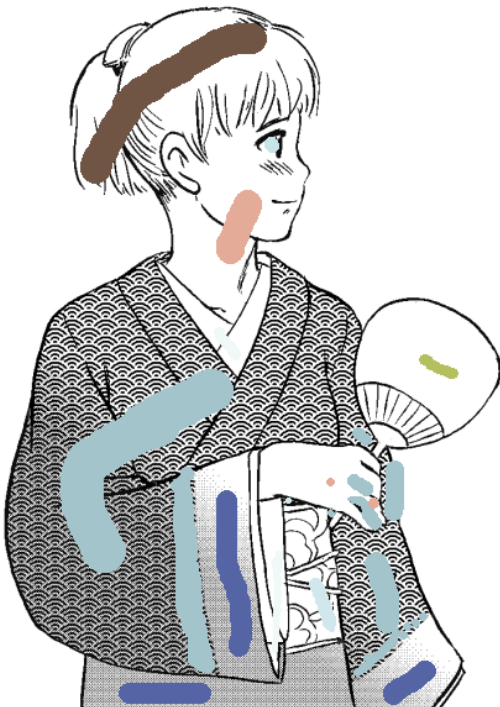
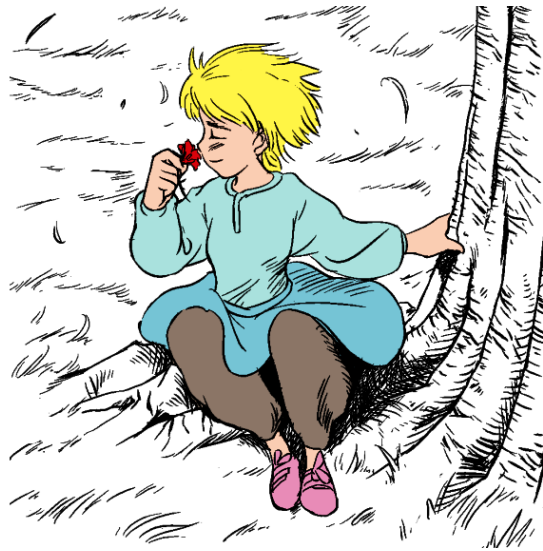


To reveal extremely tedious scribbling in the original manga colorization image (top left) we enhanced thin scribbles that are almost invisible in the original image.

Additional results



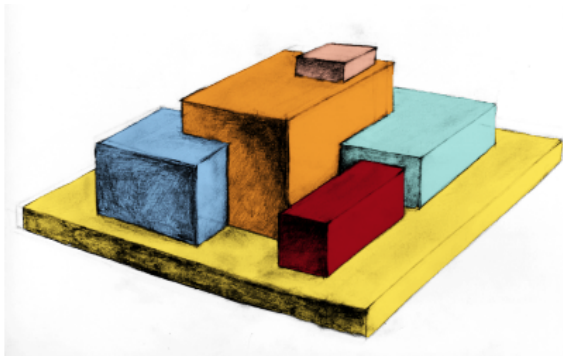
## Additional results



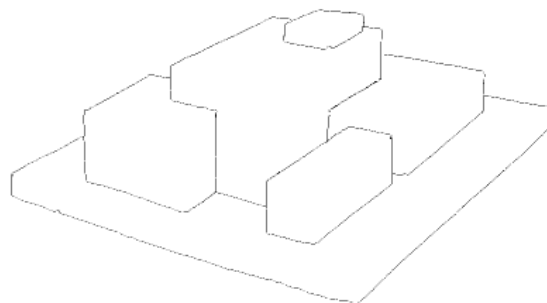
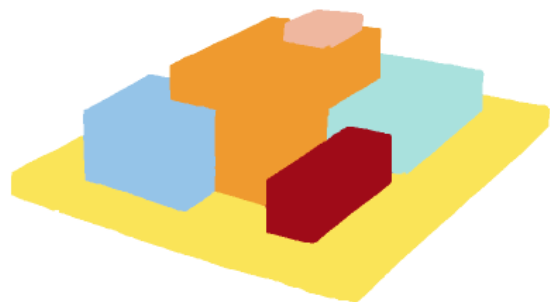
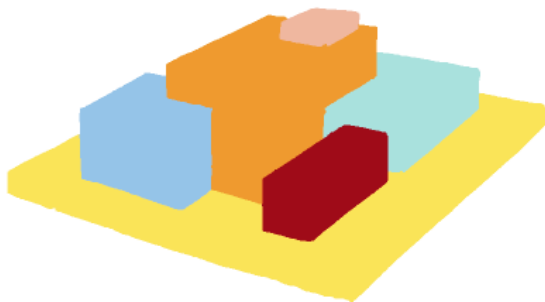
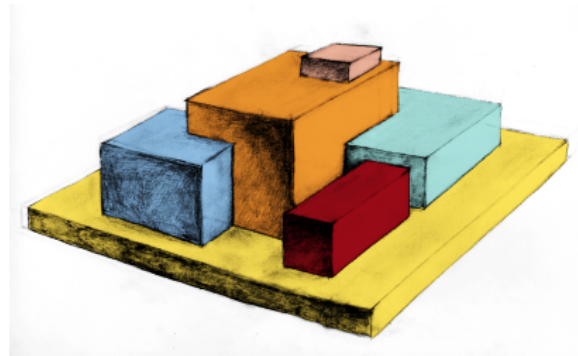
# Labelling difference between $\alpha$ -expansion and our algorithm

## Blocks (7 colors)

$\alpha$ -expansion



our algorithm (18x faster)



labelling difference

Examples on the following pages show labelling differences for paintings listed in the Table 1.

## Bottle (3 colors)

$\alpha$ -expansion

our algorithm (3x faster)



labelling difference

## Robber (6 colors)

$\alpha$ -expansion    our algorithm (17x faster)



labelling difference

# Footman (9 colors)

$\alpha$ -expansion

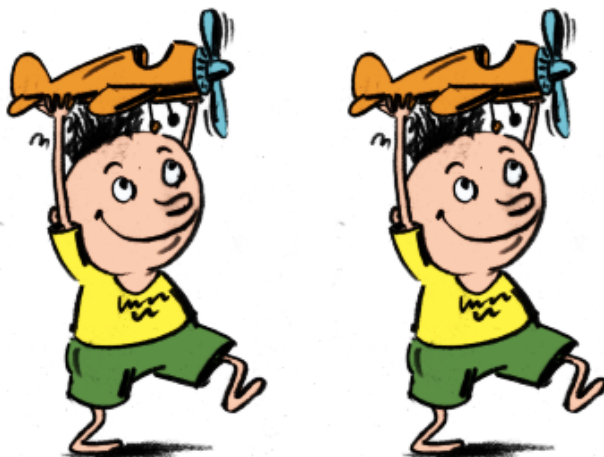
our algorithm (9x faster)



labelling difference

# Boy (7 colors)

$\alpha$ -expansion      our algorithm (17x faster)



labelling difference



# Picnic (7 colors)

$\alpha$ -expansion

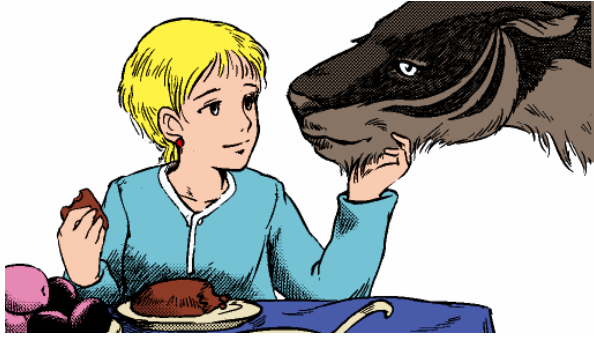
our algorithm (17x faster)



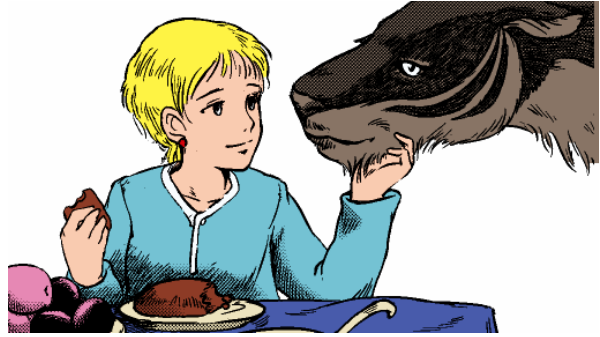
labelling difference

# Manga (11 colors)

$\alpha$ -expansion

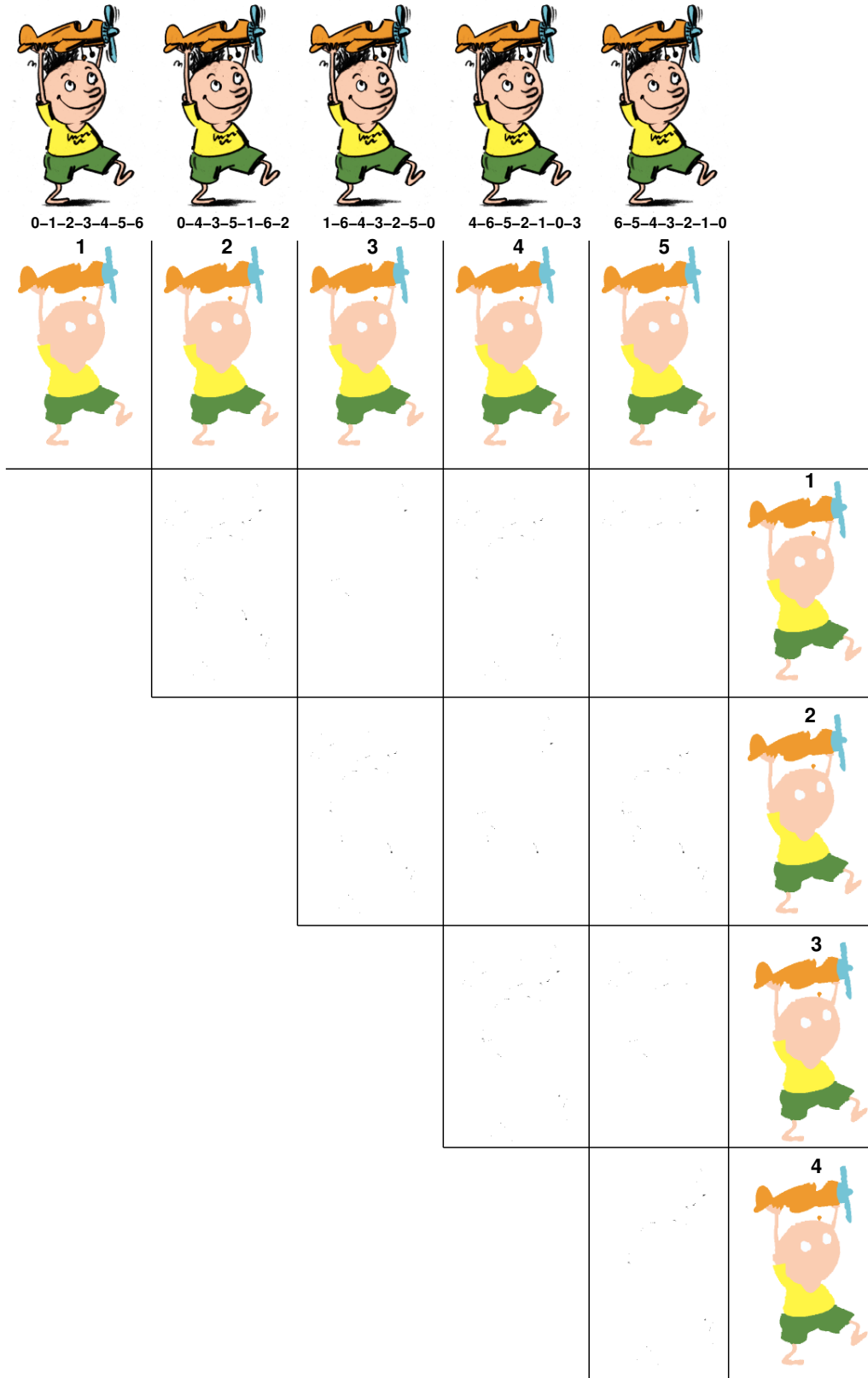


our algorithm (16x faster)



labelling difference

# Labelling difference when changing the order of color labels



This example demonstrates how sensitive is our greedy algorithm to the order of color labels (the difference is negligible except several rare ambiguities discussed in the paper).