

Supplementary Materials: Detailed Results of the Semi-Blind Test

This document contains detailed results from the semi-blind test described in Section 5.1 of the paper. In all figures, Column (a) contains the photo and the user’s sketch polygon. Column (b) is the “most similar” retrieved pictogram, as described below. Column (c) contains our result and a color-coded visualization of how it is assembled.

There is no unambiguous way to find the “most similar” pictogram. To avoid personal bias, we do not find it manually. Instead, we obtain it by running our algorithm on all retrieved pictograms with a very large $\lambda_S = 100$. In practice, we find that this often agrees with what we would have chosen. We also list the keyword in each figure; readers can search for it to view the resulting pictograms on the The Noun Project.

Since the most similar pictogram is obtained from all retrieved pictograms, it might have a different style (i.e., blackness interval) from our result.

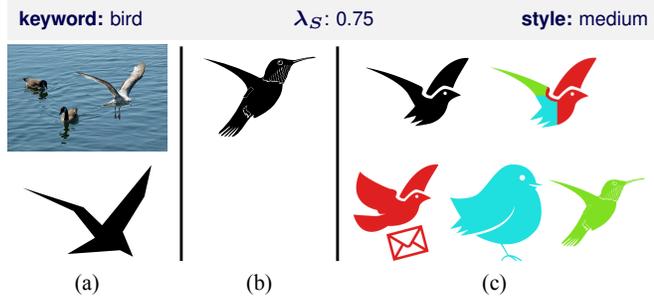


Figure 1: Bird.

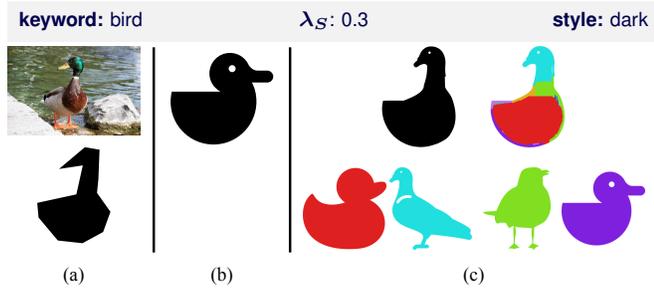


Figure 2: Another Bird.

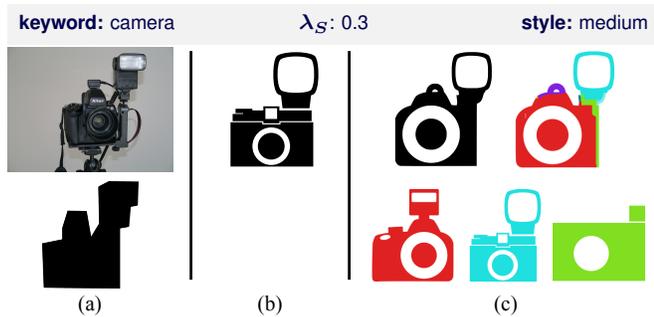


Figure 3: Camera.

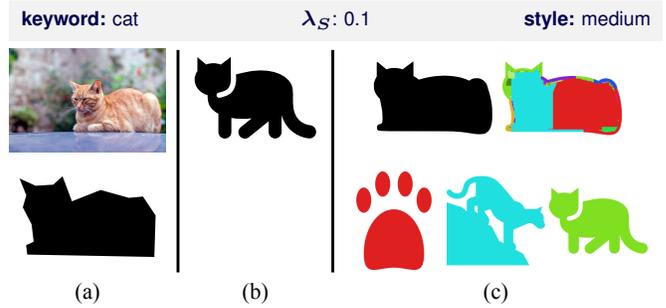


Figure 4: Cat.

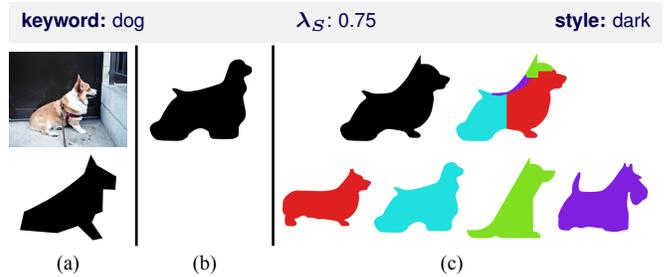


Figure 5: Dog.

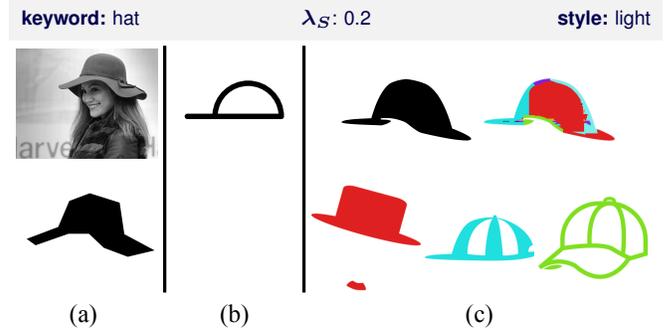


Figure 6: Hat.

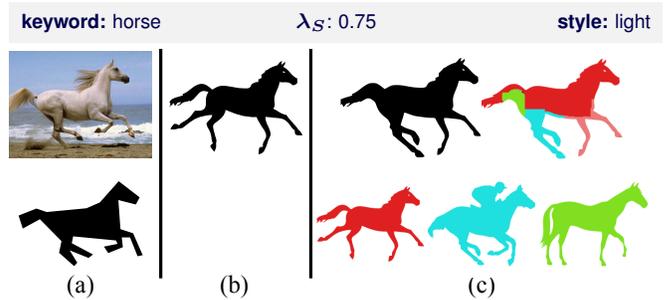


Figure 7: Horse.

keyword: house

$\lambda_S: 0.075$

style: medium



Figure 8: House.

keyword: shoe

$\lambda_S: 0.3$

style: medium

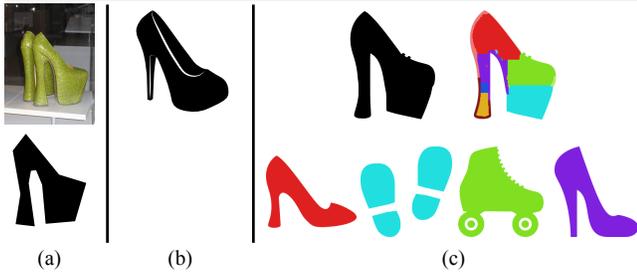


Figure 9: Shoe.

keyword: lamp

$\lambda_S: 0.5$

style: light

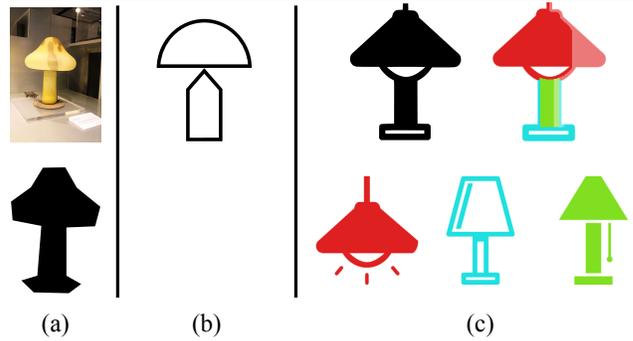


Figure 12: Lamp.

keyword: ship

$\lambda_S: 0.2$

style: medium

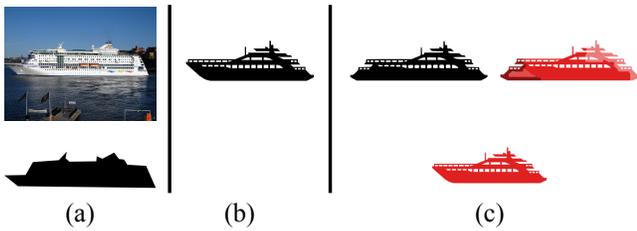


Figure 10: Ship. Note that our result combines multiple pieces of the same source pictogram to better match the sketch polygon.

keyword: bicycle

$\lambda_S: 0.2$

style: medium

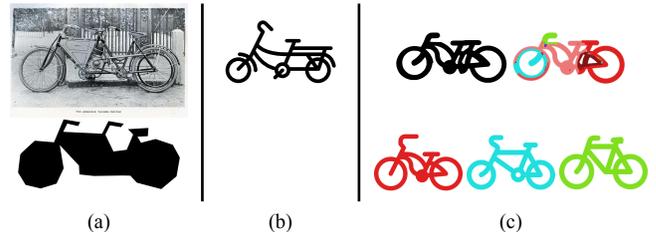


Figure 13: Tandem bicycle.

keyword: shoe

$\lambda_S: 0.5$

style: dark

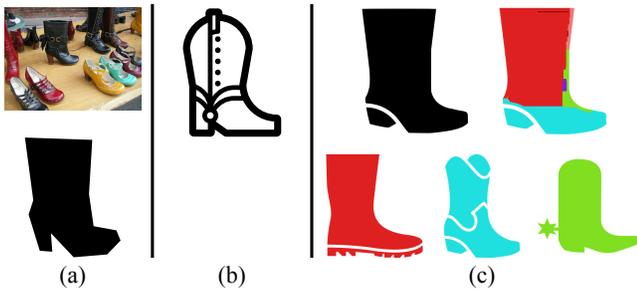


Figure 11: Shoe.

keyword: bicycle

$\lambda_S: 0.3$

style: medium

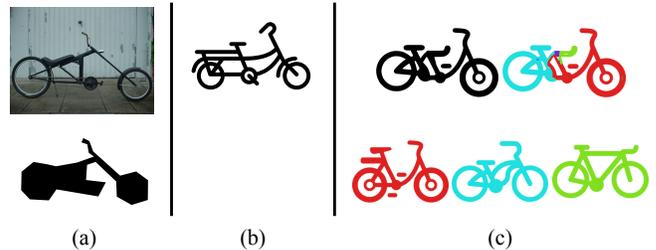


Figure 14: Chopper bicycle.

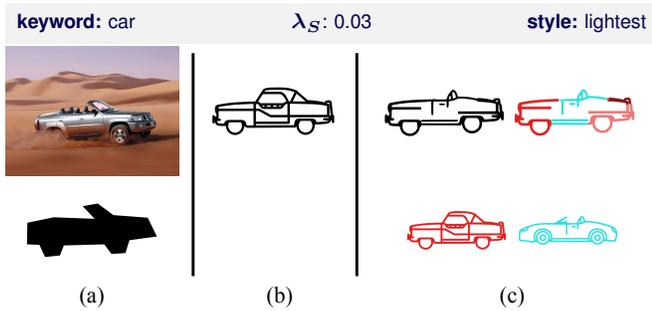


Figure 15: Car.

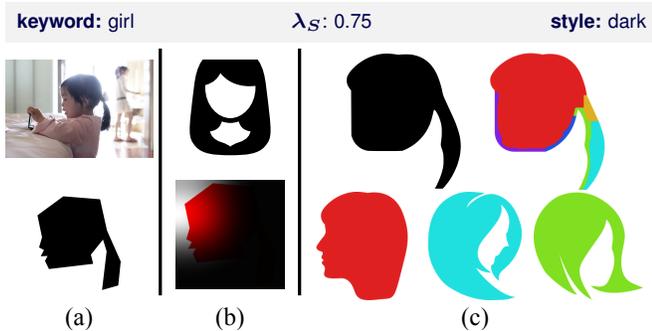


Figure 16: Girl. The input is quite different from all retrieved pictograms, so the “most similar” pictogram in the first row of (b) is meaningless. Note that the red exemplar is similar in the nose and mouth regions, but the “best result” exemplar is matched because of similarity of the forehead instead: see the details of the corresponding salient region in the second row in (b). The nose and mouth, which do not match the sketch polygon especially well, unfortunately are not retained in the remixing result.