

DIFI Validation

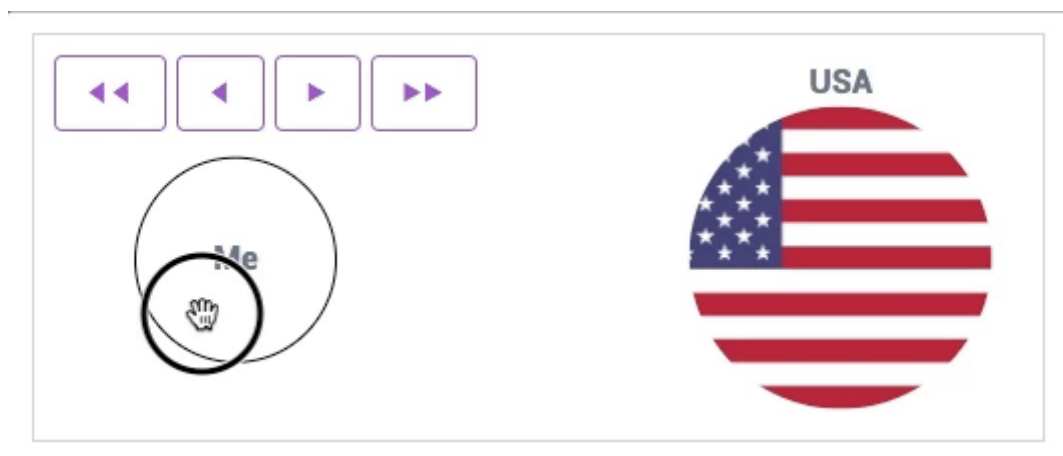
The following is a validation of the Dynamic Identity Fusion Index [1], a measure of a person's relationship to a target group (\$TARGET_GROUP). For each of eight target groups, 250 people in the United States were instructed:

“ The diagram below is designed to represent your relationship with \$TARGET_GROUP. Please indicate your relationship by clicking and dragging the smaller "Me" circle to the position that best captures your relationship with \$TARGET_GROUP.

Here is a sample DIFI user interface for the target group USA.

The eight target groups were:

1. The group to which the participant feels the strongest association.
2. A group of which the participant is not a member.
3. A group of which the participant is not a member, but to which they feel a strong association.
4. Players with the same avatar color. (Made after assignment of a colorful avatar picked from 3 colors, in minimal-group style.)
5. Players with a different avatar color. (Made after assignment of a colorful avatar picked from 3 colors, in minimal-group style.)
6. The USA
7. Kittens. (To test a group to which the participant could not possibly belong.)
8. Colorless green ideas that sleep furiously. (To test a group that could not possibly even exist.)



[1] Jimenez, J., Gomez, A., Buhrmester, M. D., Vázquez, A., Whitehouse, H., & Swann, W. B. (2016). The dynamic identity fusion index: A new continuous measure of identity fusion for web-based questionnaires. *Social Science Computer Review*, 34(2), 215-228.

We begin by importing numerical processing and plotting tools:

```
[3] import matplotlib.pyplot as plt
import numpy as np
import pandas as pd
```

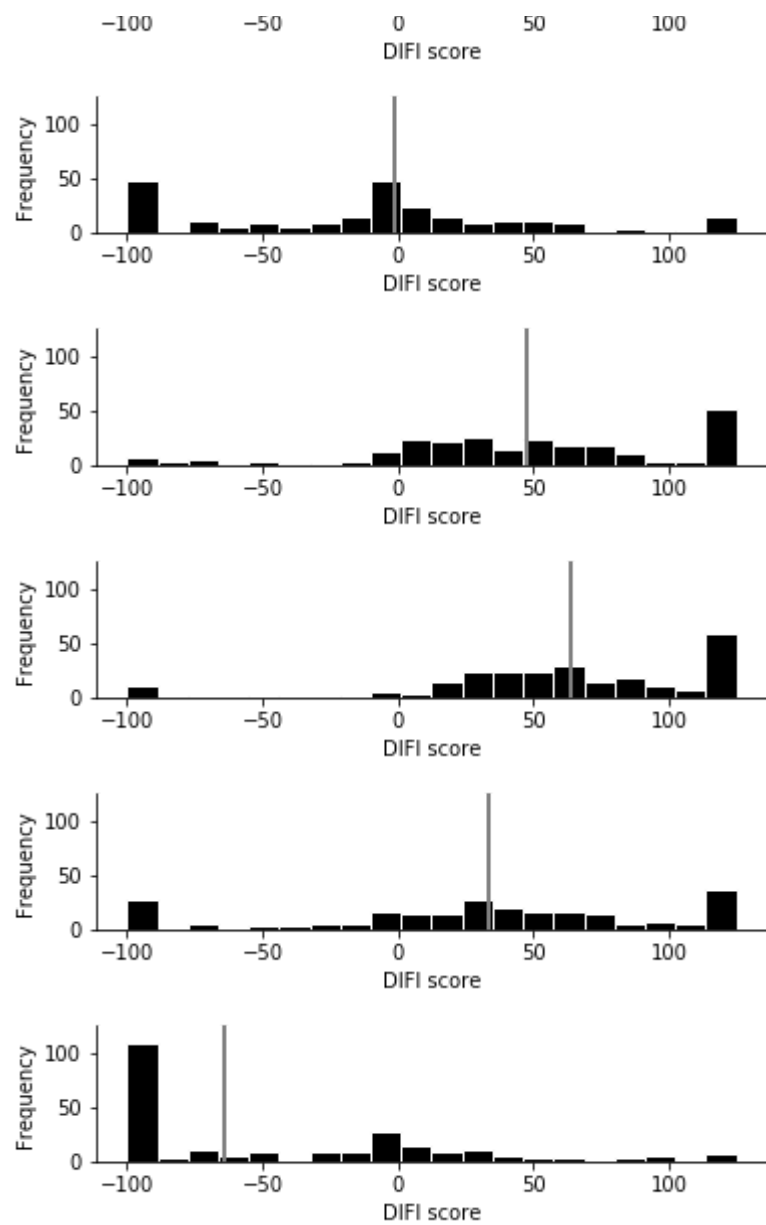
Next we define a function that plots a histogram of DIFI scores:

```
[4] def plot(f):
    data = pd.read_csv(f)
    difi_scores =
data["Overlap"].values[~np.isnan(data["Overlap"].values)]
    plt.hist(difi_scores, bins=20, color="#000000", ec='#FFFFFF')
    plt.axes().set_aspect(0.40)
    plt.axes().spines['right'].set_visible(False)
    plt.axes().spines['top'].set_visible(False)
    plt.ylim([0, 125])
    plt.xlabel("DIFI score")
    plt.ylabel("Frequency")
    plt.axvline(np.median(difi_scores), color='grey', linewidth=2)
    plt.show()
```

Nonmember

The participant is asked to pick a group to which they do not belong.

```
[6] plot("difi_strongest.csv")
plot("difi_nonmember.csv")
plot("difi_nonmember_close.csv")
plot("difi_minimal_outgroup.csv")
plot("difi_minimalingroup.csv")
plot("difi_usa.csv")
plot("difi_kittens.csv")
plot("difi_colorless.csv")
```

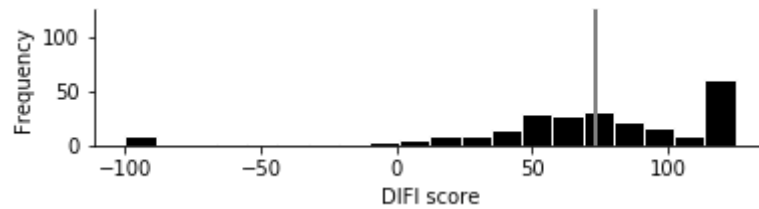


Strongest

The participant is asked to pick the group to which they feel the strongest sense of belonging.

Strongest

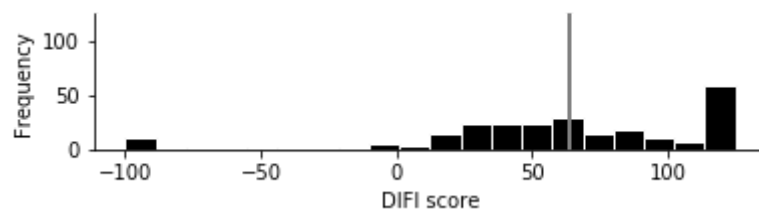
The participant is asked to pick the group to which they feel the strongest sense of belonging.



USA

The group under question is the USA.

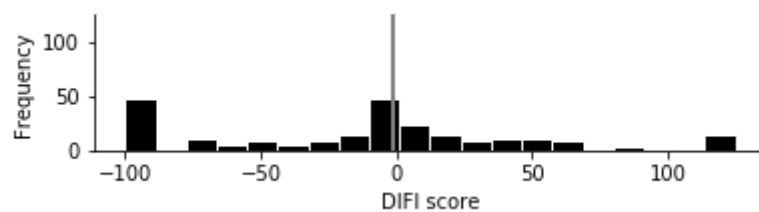
[351]



Minimal outgroup

Players are assigned an avatar with one of three colors. They fill out the DIFI with respect to players assigned other colors.

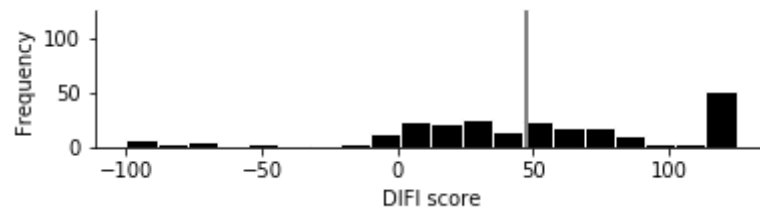
[352]



Minimal ingroup

Players are assigned an avatar with one of three colors. They fill out the DIFI with respect to players assigned the same color.

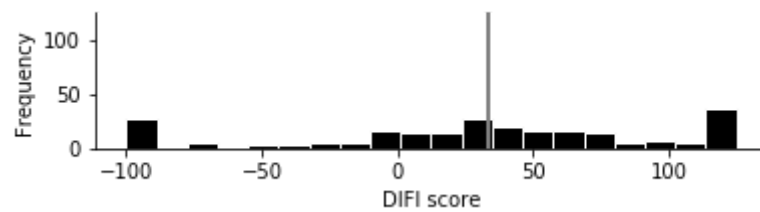
[353]



Kittens

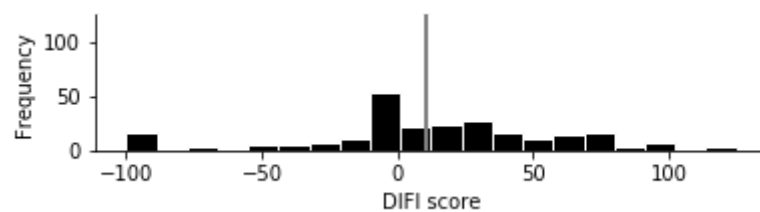
The group under question is kittens.

[354]



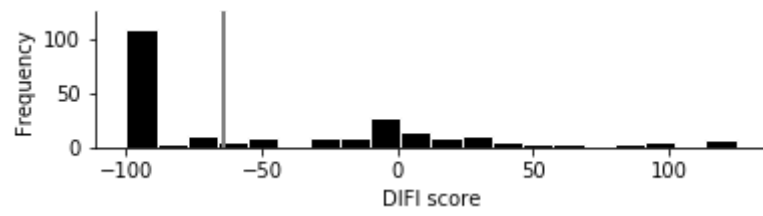
Nonmember, close relationship

[357]



Colorless green ideas that sleep furiously

[358]



Empty markdown cell, double click me to add content.