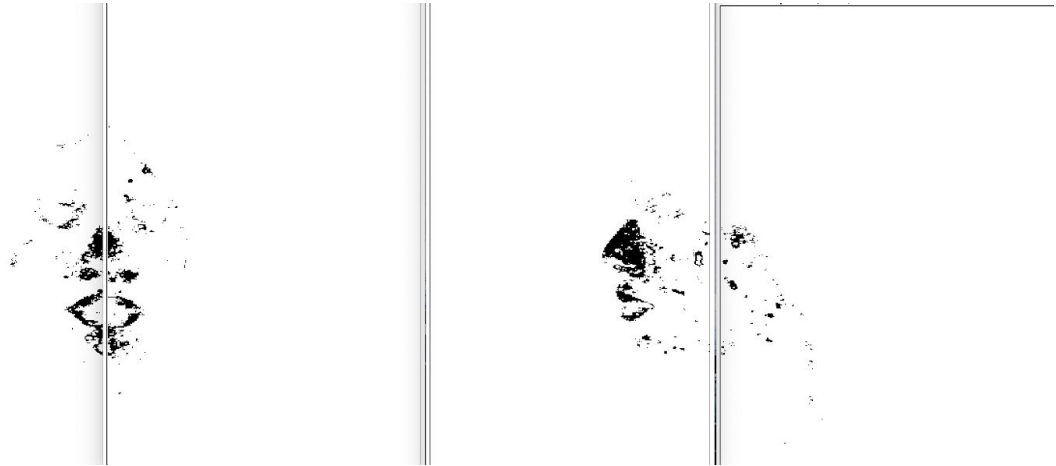


## This is a new cool stage (JK, just 1's 3 :D)

To start with, in case of orientation on MomentEngine, my first class missed some parenthesis, that's why I was always getting something like -45. Did some cool stuff on the images, presenting below

Took Jack's 11th image and 01th image



Took the images, cropped to two pieces and computed orientations.

For the first image ... values where 0.36871428548531576 and -0.36440803194244975.

Clearly, if you add them together, you get something close to 0.

For the second image I got 0.19065853962459134 and -0.11046986669978963. Adding those will give us something like 0.08... Here we can conclude that if you add the orientations and get something too close to 0, then most probably the two parts have very close central moments and the person is just looking straight.

*111\_11's left*

Orientation

0.36871428548531576

Eccentricity

2.4382749733902362

*111\_11's right*

Orientation

-0.36440803194244975

Eccentricity

2.234059378165873

*111\_01's left*

Orientation

0.19065853962459134

Eccentricity  
2.813137960403029

*111\_01's right*

Orientation

-0.11046986669978963

Eccentricity

1.907393974263902

Another fun part



*111\_10's left*

Orientation

0.15703311311847068

Eccentricity

1.894953590489893

*111\_10's right*

Orientation

-0.1771342716434885

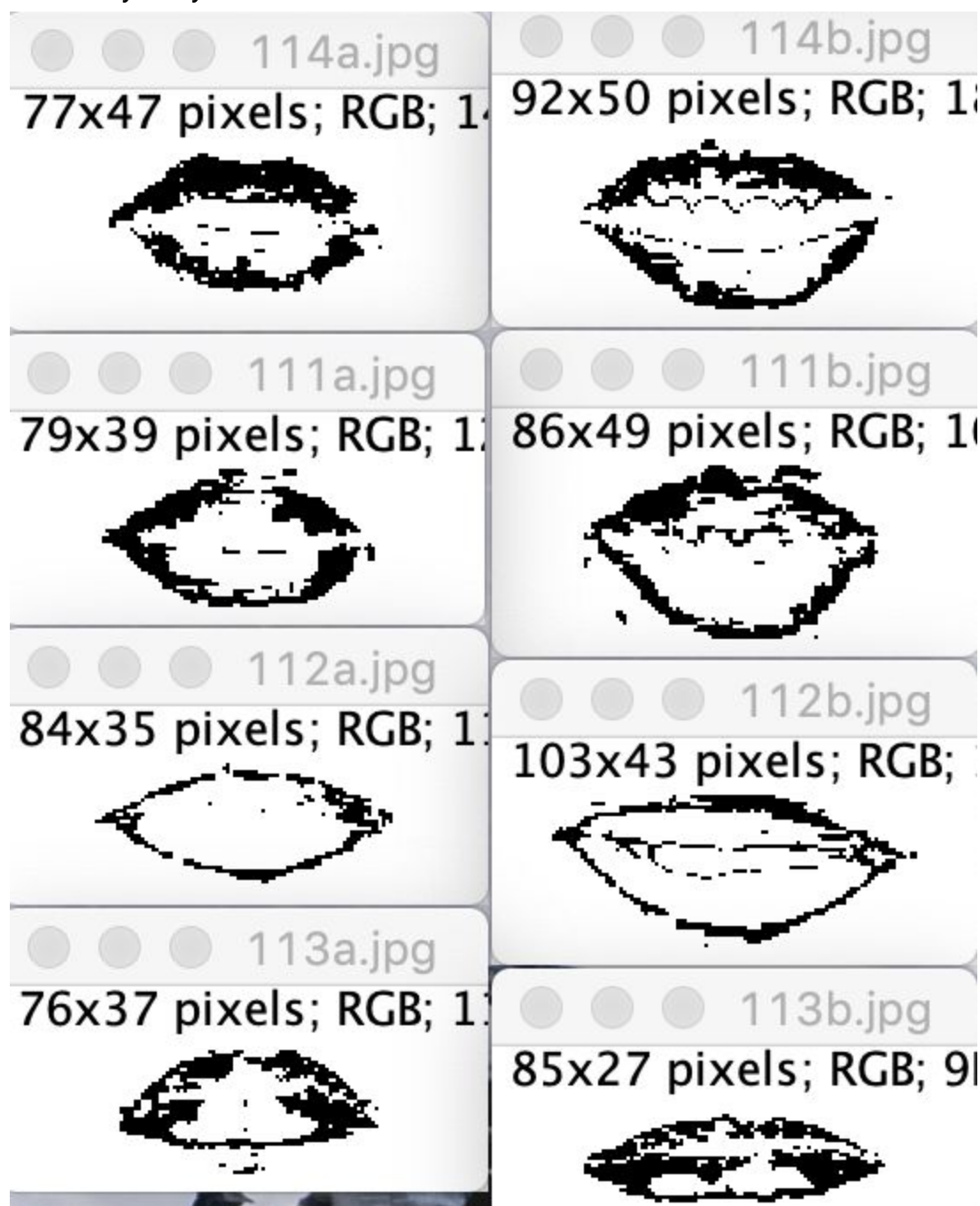
Eccentricity

2.7533407331790998

The sum of 10's right and left orientations is -0.02 and the sum of 01's right and left orientations is 0.08. We can't conclude for sure, but let's just with this result say that if person looks to right, its right and left orientations's difference is -0.02, otherwise that's a positive 0.08. And yet, it is too close to 0 when he looks straight.

And I believe we could not achieve this result with binary layer 3, since possibly ears will be seen and the balance would get the same.. The sum would be closer to 0 in rotations, which is not desired to get.

With the next step I got all the 4 boy's mouths (serious and smiling) and tried to do some eccentricity analysis.



For 114a and 114b

Orientation

-0.9112056332951743

Eccentricity

2.7912178868117845

Orientation

-0.3140617865653648

Eccentricity

3.619411693548172

*As a person smiles, the eccentricity grows (this is a normal behavior)*

*For 111a and 111b*

Orientation

-0.782108761977216

Eccentricity

4.1708558302633705

Orientation

-0.9426468850308841

Eccentricity

3.39168140338352

We see that as a person smiles, the eccentricity becomes even smaller (this was quite not expected but I think that it's because in both cases the person has some similar amount of black and white dots)

*For 112a and 112b*

Orientation

0.13259793603881476

Eccentricity

5.558789560679382

Orientation

-0.2472156900756414

Eccentricity

6.259735910201203

The normal behavior (with the smile, eccentricity becomes bigger)

*For 113a and 113b*

Orientation

0.7014671780147514

Eccentricity

3.8143595787361297

Orientation

0.48981569801744057

Eccentricity

8.81770057079325

The behavior is maintained (I think in case of smile it gets much much bigger since he smiles with enlarging the lips space into horizontal direction).