**Paper Summary:** Online Biases in Offline Platforms: Study of Homophily & Avoidance

**Objectives of Paper:**

Study of whether **our offline biases** (such as race, age, gender) are apparent in **online sharing economy platforms**. Are all participants treated equally? Is it fair? There is a tendency for similar people to gravitate towards each other whereas different people seem to avoid each other. This may be a sign of whether business propensity is a major focus for that host/not. Expose and hoping to reduce biases by providing recommendations that can be done in platform design + monitoring. Dynamics between Hosts and guests

**Findings:** Homophily – gender, age and ethnic background – regardless of property type , avoidance – users of different ethnic background

**Relevant Points:**

* Face to face interactions replaced by technologically mediated ones
* Airbnb hosts turn down potential guests based upon ethnic backgrounds
* Homophily – Social phenomenon where people gravitate towards those like themselves
* Avoidance – the tendency to avoid members of a social group sharing a trait perceived as undesirable
* Avoidance is socially unacceptable, whereas Homophily is often perceived more ‘natural
* Ideological homophily
* Opinions and content exposed to
* Race gender + age – identified as main personal features driving online homophily
* Low socioeconomic status and/low population density – harder time selling services
* Black sounding names less bookings accepted than white
* Low economic status -> harder to sell services & when they want to use other peoples
* Blacks also charged less than whites for equivalent rent
* Method: used IDS to get profiles from Airbnb site
* Image Processing software - > face localisation (human face or not - extract bounding box) + extract information
* FaceReact + Indico - possibly use the best tools from here / investigate if there are improvements
* Indico – more accurate - images at an angle
* Tested Betaface, Sightcorp, F.A.C.E + Face++ - all correct – gender
* Sightcorp – agegroup
* Betaface – ethnicity
* Used all in parallel
* Confidence levels -> 0,3 ∈ [0, 1]
* Airbnb does not make available – race, gender, age , who stayed with whom , request was refused /cancelled – NB – now it does allow you to see when host cancels \_ it appears as a review on their page
* Airbnb – Demographics Section – female base generally, + White (overrepresented according to local communities)
* Age quadrants
* Full Property vs Shared consideration
* Rather young community – is it still like that ?
* Cant make claims on causality – study is purely statistical
* Cant distinguish between avoidance and discrimination
* Application possibility – design interventions aimed – provide users with detailed information about peers they chose to interact/not in the past – highlighting differences or systematic preferences from outcomes that – obtained under unbiased selection process
* Encourage desireable behaviours (heterophily) – incentives /rewards – those hosts that have a variety of guests / do not cancel.
* Incentivise removing parts – could be contributing towards guests analysing/hosts analysing profiles – instant booking scheme.

**How can this research contribute to my project:**

* **Racially equal – but mabe similarity leads to higher satisfaction. –**
* **Airbnb – goal is to enable highly statisfiable stays – the personality of the host and guest may Impact**

**Any other ideas that I thought of:**

* Similarity influence vs Business propensity graph. H: How the more that guest/host are concerned (jointly) about business propensity, the less the similarity impacts the satisfaction.
* Find more papers on similarity effects in sharing economy
* Look into recent studies where people are actually gravitating to people different to them – pleasureable ? or not ?
* Usually similarity leads to pleasurable sharing economy experiences and dissimilarity not - study?
* Can we extract personality from the profile picture – Expressions + even pictures without face (but maybe not as some information will be missing ) – look into studies
* Think of nice graphic of showing hosts/guests satisfaction across the world – gis map?
* The end – have a tool where you can add/subtract similarity features and see
* The various types of homophily and evidence of it in the past
* Nature of interactions in online platforms
* Has superhost/instant booking decreased homophily - look into definition of superhost . maybe look at relationship between homo and satisfaction before superhost + instant booking and after.
* Remember to Mention limitations e.g. accuracy of study is dependent on accuracy of tools used .
* Reduced risk by cross validating annotations across tools
* Limited to what information we van get from platform, however, platform owners should have access to information that we did not, and could probably produce more accurate results

**Further Investigation into:**

* Racial and gender Discrimination in transportation network companies
* Racial discrimination in the sharing Economy (Edelman)+ Digital Discrimination
* McPherson Smith Lovin – Homophily
* Thelwall 2009
* Thebault Spieker 2015 – Taskrabbit.
* Insideairbnb – data
* Face detection tools - faceplusplus, face-api.sightcorp.com, betaface.com/wpa, indico.io, github/cooyzee/face-react