

#### **Session 1:**

nal Lines Pricing – the Revolution You Might Have

Session 2:

ms – She Didn't Really Post That on Facebook, DD Session 3

d Life Insurance – Promoting Innovation through Consumer

#### **IRES Career Development Seminar**

Bi

#### **About Birny Birnbaum**

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#### Why CEJ Works on Insurance Issues

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Insurance Products Are Financial Security Tools Essential for
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 Individual and Community Economic Development
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 Insurance is the Primary Institution to Promote Loss
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 Prevention and Mitigation, Resiliency and Sustainability:
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## **Personal Consumer Information in Big Data**

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# What's So Big about Big Data?

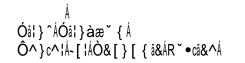


#### **Personalization**

#### **Big Data Example 1: Predicting Opioid Abuse**

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## **Big Data Example 2: Willis Towers Watson RADAR**



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#### **Radar Pricing Software 4.5 Tests Fairness**

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## AlNow, "Discriminating Systems: Gender, Race and Power in Al"<sup>3</sup>

The use of AI systems for the classification, detection, and prediction of race and gender is in urgent need of re-evaluation.

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# "Facing Up to Bias in Facial Recognition," American Banker 4

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#### **Big Data Example 4: Genetic Information**

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# From the Position Paper on Genetic Information U.S. Council for Responsible Genetics from 1996.

Á Óã¦}^ÁÓã¦}àæˇ{Á Ô^}c^¦Á-[¦ÁÒ&[}[{ã&ÁRˇ∙cã&^Á

GÍÁ Óã\*ÁÖæcæÊÁQ}•~¦æ}&^ÁÚ¦ã&ã}\*ÁBÁÔ|æã{•ÁÙ^cc|^{^}cÁ

QÜÒÖÁÔÖÙÁ Œˇ\*ˇ•cÁFJÊÁG€FJÁ

## ÕÒ ÞÒ VQÔÁ ÖQÙ Ô ÜQ TQ ÞŒ VQU ÞÁ Ù Ò V ÙÁŒÁ ÖŒ ÞÕ Ò ÜUW ÙÁ Ú Ü Ò Ô Ò Ö Ò Þ VÁ

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## Big Data Example 5: Aerial Photography at Granular Detail

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# Keener Insight Into Property Conditions

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#### Rapid & Effective Disaster Response

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#### **Big Data Example 6: Criminal History**

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"TransUnion recently evaluated the predictive power of court record violation data (including criminal and traffic violations)

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## **US DOJ Investigation of the Ferguson Police Department**

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#### **Big Data Example 7: Carpe Data**

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## Carpe Data Claims Activity - How It Works

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#### **Next Generation Indexes**

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#### **Claims Director**

#### Improve claims triage with our fraud analytics scoring system

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Big Data Algorithms Can Reflect and Perpetuate Historical Inequities Á
Óæ¦ [&æ•Áæ} åÁÙ^|à•cKÁÁBig Data's Disparate Impact<sup>7</sup>
Á
Όç [&æc^•Á[~Áæ]\* [¦ãc@ { ã&Ác^&@ }ã

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c@æcÊÁ•æ^ÊÁ&[´{] `c^¦ã:^åÁ~æ&ãæ|Á¦^&[*}ãcã[}Á¸ã||Áà^Á`•^åÁ~[¦Á<u>{æ••</u>Á
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### "Insurance Companies Are Paying Cops To Investigate Their Own Customers," BuzzFeed News, August 15, 2019

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### NAIC Activities Related to Big Data and Al

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## Insurers' / Producers' Use of Personal Consumer Data – the Role of Supervisors

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### **CEJ's Principles/Values for Ethical Al**

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#### Values to Guide Ethical Use of Al

### Artificial Intelligence: Australia's Ethics Framework<sup>11</sup>

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## Values to Guide Ethical Use of Al Transatlantic Consumer Dialogue

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### **New York Department of Financial Services Guidance to Insurers:**

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# New York DFS Rule Regarding Use of Education and Occupation Insurance Regulation 150

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## **Ethical Algorithms: Minimizing Disparate Impact in Insurance Models**

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Step 1: Include race, religion and national origin – or proxies for these characteristics if actual i ndividual characteristic unknown – as independent variables – control variables – in the model.

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Step 2: Omit race, religion and national origin when the model is deployed.

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#### Illustration of One Technique to Minimize Disparate Impact

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#### What Happens When We Explicitly Consider A Variable For Race?

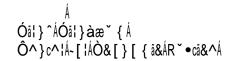
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# Why is a Statistical Test for Disparate Impact Consistent with Actuarial Justification Used by Insurers?

## **Ethical Algorithms: Reasonable and Necessary** for Insurance Pricing and Claims Settlement Models

# Antitrust and Competition Concerns With Data Brokers and Vendors of Algorithms



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(WKLFDO $OJRULWKPV 6RXUFHV
3DXOLQH 7 .LP 3$XGLWLQJ $OJRULWKPV IRU 'LVFULPLQDWLRQ'
KWWSV ZZZ SHQOROQDOZLUQHHYLHZ8F3RDP/5181612QOLQH
&ODLUH: KLWDNHU 3 (WKLFDO $OJRULWKPV'
KWWSV ZZZ NGQXJJHWWJ/QERQB HWKLRGD/HDP OD OJRULWKPV
(ULQ 5XVVHO 37KH (WKLFDO $OJRULWKP'
KWWSV ZZZ FRJQLWLYWWHPHWKFLFFDO DOJRULWKP
%DURFDV DQG 6HOEVW
KWWSV SDSHUS/DSHUQ FRPP'D/ERVOWUDFWBLG
.UROO HW DO 3$FFRXQWDEOH $OJRULWKPV
KWWSV SDSHUSVDS/MUQFRPP'D/BRVOWUDFWBLG
9 L U J L Q L D Auxo En ati Og Nh Veguality: How High Techools Profile, Police and Punish the Poor
6HOEVW DQG %DURF$DS\SH3D76KHRIQIMSXXULDMLIQYDEOH 0DFKLQ
KWWSV SDSHUS/DSHUO FRPP'D/ERVOWUDFWBLG
/HY\ DQG %DURFDV 3"HLVEJUQLPQQQD$WDLPQQWDMQW2/QOLQH 0
KWWSV SDSHUS/DSHUO FRPP'D/ERVOWUDFWBLG
1 H Z < R U N 7 L P H V 3 $ OL D R/ U L4WDKOP OF $ OZ G WANK & \ Q $WXKJLXDV WZ R U
KWWSV ZZZ Q\WLPHV FRP
                                    X D VQ IGR DV ZOLOVUIR UF L QAVIK R LY DD Q ZGR EU IND KY WTP O
ODUWLQ .LUVWHDQQ((WOKL:FKDDOOV$,OVJRU5,WWKSPRO$)QLGEQKHRUPVU,W" 2$FWDRLEDHDEOHDW 665
KWWSV VVUQ FRPROKOFWWSUDIEGW GRL RVVUQ
.LUVWHQ 0DUWLQDW(LWRKQLVFDDQQGP$SFOFLERUXLQWKDFEVLOLW\ RI $ O J
KWWS NLUVWHQHPODWJWXLSOO RQDHOWDYZISVLFOORVOX9WFVDQG$FFRXQWDELOLW\RI$OJRULWKI
LUVWHQÖŒMŒÁŒŐVÕÜQÕŒVUÜÙÊÁÓQÕÁÖŒVŒÊÁBÁÜÒÙÚUÞÙQÓQŠQVŸÁUÞŠQÞÒÁ
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$, DQG%LJ'DWD $EOXUHLSIKUKUQWWVREDDBX&BMQHQXHVVFKQFMD$COOLHPVSVDDFQWCDUVR0DQWHOHUR
KWWSV UDEOàaQWLV•UPHYLPHV UPFRP T@PŏN ÀGÐ ,p" QUJLQLD (X RÄ , % À @
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