# Video Segment 6: Making a Social Impact with Analytics: Looking Ahead

*"We are trying to shift away from [labeling] something true or false to [recognizing] how is the information biased?" -Dr. Duncan Watts*

## NOTE-TAKING GUIDE

The Wharton panelists each discuss **next steps** for their research, informed by the data collection and machine learning that has led to this point. What are they excited about for the future of their projects?

**Dean Knox and Police Web Cams:**

**Hamsa Bastani and Health Solutions in West Africa:**

**Duncan Watts and Journalist Spin:**

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Dr. Hamsa Bastani says, "The machine-learning process itself is kind of human in the loop in that it depends on inputs from humans." Describe how she discusses the intersection of human intelligence and artificial intelligence to address the following:

**Data Equity Challenges**:

**Resource Allocation**:

**Diverse Stakeholders**:

**Reflection**: Dr. Duncan Watts says, **"**We talk a lot about truth and facts in the media. We use these words like we know what we mean. Turns out that truth is an extremely elusive concept." What does he mean by this? Do you agree? Why are things not as black and white, right or wrong as they may seem? Do your opinions cloud the truth? As you think about being a changemaker and making a social impact, how might you better arrive at a place of truth?

# THE LANGUAGE OF BUSINESS
## (Linked terms are defined in the Wharton Global Youth Video Glossary)

Data                                    Media Bias

Inflation                               Supply Chain

Media                                   Unemployment


**Academia**: The teaching, studying and scholarly experimentation that happens in colleges and universities.

**Academic Journal**: A publication in which scholars, including college professors, publish their research findings. Their work is reviewed by peers and must be accepted into an academic journal, at which point it becomes a forum for the scrutiny and discussion of the research.

**Academic Research**: Research conducted by faculty at a university like Penn that focuses on creating new ideas and perspectives. Academic researchers read all the existing studies and papers examining a specific topic or theory and then see where they can add value with new experimentation and insight.

**Artificial Intelligence or AI**: Intelligence demonstrated by machines (computers), rather than humans.

**Auxiliary Data**: Data gathered from other sources outside the main data-collection process.

**Beyond Business**: An ongoing conversation at the Wharton School of the University of Pennsylvania that explores the most complex and pressing issues impacting individuals and organizations across the world. Each year Wharton Global Youth creates Explore Business mini-sites around different Beyond Business themes.

**Bias in Machine Learning**: When an algorithm produces results that are systematically prejudiced due to poor assumptions in the machine learning process – perhaps, for instance, the data is imperfect or biased.

**Biased Data Views**: Views on issues that are driven by data errors that occur when certain elements of a dataset are overweighted or overrepresented or underweighted and underrepresented.

**Computer Vision**: A field of artificial intelligence that enables computers to derive information from images, videos and other inputs.

**Data Analytics (or just Analytics)**: The systematic computational analysis of data or statistics. It is used for the discovery, interpretation, and communication of meaningful patterns in data.

**Data Equity**: Equity is the quality of being fair and impartial. When applied to data, it means having an equity mindset to make sure data is collected, analyzed, interpreted and shared fairly, without bias or exclusion.

**Data Visualization**: The graphical representation of information and data.

**Dean Knox**: An assistant professor of operations, information and decisions at the Wharton School of the University of Pennsylvania and co-founder of Research on Policing Reform and Accountability.

**Demand Forecasting**: The process of using predictive analysis of historical data to estimate and predict customers' demand for a product or service. In one model, for example, you might use sales data from the past to predict sales in the future.

**Duncan Watts:** A professor of operations, information and decisions at the Wharton School of the University of Pennsylvania and director of the Computational Social Science Lab at Penn, where he leads the Penn Media Accountability Project.

**Erika James**: Dean of the Wharton School with research interests in crisis leadership, workplace diversity and management strategy.

**Framing Bias**: When the manner in which data is presented or framed affects decision-making; people make a decision on the way the information is presented, rather than relying on the facts.

**Hamsa Bastani**: An assistant professor of operations, information and decisions at the Wharton School of the University of Pennsylvania, who has been analyzing dark web data related to human trafficking to provide new insights into online sex-trafficking recruiting practices and, more broadly, illicit supply chains on online platforms.

**Interactive Dashboard**: A business data management tool that allows users to interact with data by tracking, analyzing, monitoring, and displaying key business metrics. Users can dig into an organization's operational information and filter it in different ways so that data can be viewed from different perspectives or in more detail.

**Journalist**: A person who writes for newspapers, magazines or news websites or works as a broadcaster of news.

**Multi-modal Learning**: Machine learning that aims to build models that can process and relate information from different modalities, such as various data types like image, text, speech and numerical data.

**Optimization Model**: Through the use and analysis of data, companies identify and solve problems that are affecting their operational efficiency and build new processes and systems to improve efficienc

**Penn Media Accountability Project (PennMAP)**: An interdisciplinary research project of the Computational Social Science Lab at the University of Pennsylvania dedicated to enhancing media transparency and accountability at the scale of the entire information ecosystem.

**Police Administrative Records**: Records that detail how a police department is managed, including use-of-force patterns.

**Predictive Model**: A statistical technique to predict future behavior. In this form of data-mining technology, you analyze historical and current data and generate a model to help predict future outcomes.

**Machine Learning**: Using and developing computer systems that learn and adapt by using algorithms and statistical models to analyze and understand patterns in data.

**Machine Learning Model**: A program that has been trained to recognize certain types of patterns and make decisions from data it has not yet seen.

**Media Framing**: The angle or perspective from which a story is told.

**Noisy Data**: Data that are corrupted, distorted and often meaningless. They can't be understood and interpreted by machines.

**Satellite Data**: Images and earth observation data of the earth's surface and its atmosphere gathered by satellites in Earth's orbit.

**Selection Bias**: The bias (prejudice against or in favor of one thing, person or group compared with another, usually in a way that is unfair.) introduced by the selection of individuals, groups or data for analysis in such a way that proper randomization doesn't happen. The result is that the sample under study is likely not representative of the population that is being analyzed.

**Speech Recognition**: When a computer has the ability to identify and respond to the sounds produced in human speech.

**Stakeholder**: A person with an interest or stake in something, especially a business. In many companies, investors are stakeholders, as are employees, managers and customers

**The Wharton School**: The Wharton School, also referred to as just Wharton, is the business school of the University of Pennsylvania, a private Ivy League university based in Philadelphia, Pennsylvania. Wharton is a world leader in business education and a hub for academic research in all areas of business.

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