How computer algorithms shape our experience of the real world

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The use of algorithms to filter and present information online is increasingly shaping our everyday experience of the real world, a study published by *Information, Communication & Society* argues.

Associate Professor Michele Willson of Curtin University, Perth, Australia looked at particular examples of computer algorithms and the questions they raise about personal agency, changing world views and our complex relationship with technologies.

Algorithms are central to how information and communication are located, retrieved and presented online, for example in Twitter follow recommendations, Facebook newsfeeds and suggested Google map directions. However, they are not objective instructions but assume certain parameters and values, and are in constant flux, with changes made by both humans and machines.

Embedded in complex amalgams of political, technical, cultural and social interactions, algorithms bring about particular ways of seeing the world, reproduce stereotypes, strengthen world views, restrict choices or open previously unidentified possibilities.

As well as shaping what we see online, algorithms are increasingly telling us what we should be seeing, the study argues. For example, an algorithm that claims to spot beauty and tell you which selfies to delete implies we should trust technology more than ourselves to make aesthetic choices. Such algorithms also carry assumptions that beauty can

be defined as universal and timeless, and can be easily reduced to a particular combination of data.

The idea that everything is reducible to data is also beginning to affect the way people perceive their environment and everyday relations. This can be seen in the growing popularity of wearable devices that track aspects of our physical activity and health then analyse and relay them back to us. Such algorithm-driven technologies transform biological items and actions into data – a process that is unquestioned, normalised and invisible.

Professor Willson said: "By delegating everyday practices to technological processes, with the resultant need to break down and reduce complex actions into a series of steps and data decision points, algorithms epitomise and encapsulate a growing tendency towards atomisation and fragmentation that resonates more broadly with an increasing emphasis on singularity, quantification and classification in the everyday."

 More information: Michele Willson. Algorithms (and the) everyday, *Information, Communication & Society* (2016). DOI: 10.1080/1369118X.2016.1200645

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