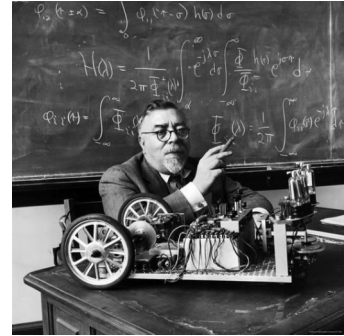


FEEDBACK AND FEEDFORWARD

by Rutherford

Every time I see the word ‘feedforward’, it grates just a little more.

At the end of WWII, mathematician and the father of cybernetics, [Norbert Wiener](#), was tasked with solving the increasingly urgent problem for the US military resulting from the high speeds at which the new jet engine operated – as a result of which, pilots often were unable to react in time to avoid collisions (with mountains, other jets etc.). Wiener’s solution made a significant contribution to the development of the ‘autopilot’ system through which an onboard computer gathered information (about altitude, pitch, airspeed etc.) from the environment, evaluated its implications for the aircraft, made any necessary adjustments, and then re-evaluated the situation – and did all of this much faster than a human pilot could react.



Professor Norbert Wiener: mathematician, philosopher and originator of cybernetics

The term Wiener coined for the process in which information from the environment is used to inform subsequent actions and decisions is ‘feedback’.

A key aspect of this [cybernetic] process is information feedback [which] converts information to action; this action generates information used for future action, and the system continues to self-regulate as information is fed back into it.¹

Accordingly, ‘feedback’ is the correct term to describe information (such as comments on a student’s essay) intended to inform future actions and decision (what they should do differently next time).

Whoever coined the term ‘feedforward’ clearly doesn’t understand the meaning of ‘feedback’.

¹ Schultz, Timothy P. *The Problem with Pilots: How Physicians, Engineers, and Airpower Enthusiasts Redefined Flight*. (2018). Baltimore: Johns Hopkins University Press.