## Conclusions

- Auto-Tune allows us to manipulate pitch as opposed to timbre
- It's an interesting tool that often gets typecast as a thing on rap tunes
- There are still uses cases that are not fully explored
- Thomas Bangalter "we use Auto-Tune in a way it wasn't designed to work ... [p]eople are often afraid of things that sound new."



## Further Reading/Links

- Wavetables
  - "Real-Time Audio Programming with Bela: Lecture 3" <a href="https://www.youtube.com/watch?v=fufNzqgjej0">https://www.youtube.com/watch?v=fufNzqgjej0</a>
- Circular Buffers
  - "Real-Time Audio Programming with Bela: Lecture 11" <a href="https://www.youtube.com/watch?v=xQBftd7WNY8">https://www.youtube.com/watch?v=xQBftd7WNY8</a>
- Pitch Detection
  - "Pitch Perception Models" Alain de Cheveigné
    <a href="http://recherche.ircam.fr/pcm/pressnitzer/P2web/Alain/2004\_pitch\_SHAR.pdf">http://recherche.ircam.fr/pcm/pressnitzer/P2web/Alain/2004\_pitch\_SHAR.pdf</a>
- History of Auto-Tune: <a href="https://soundstudiesblog.com/2014/04/21/its-about-time-auto-tune/">https://soundstudiesblog.com/2014/04/21/its-about-time-auto-tune/</a>
- Profile of Andy Hildebrand: <a href="http://priceonomics.com/the-inventor-of-auto-tune/">http://priceonomics.com/the-inventor-of-auto-tune/</a>