Design ideas

# Study 1:

## Manipulations (2-way interactions)

* mean f0 and f0-SD:
  + mean f0 ↑ - f0-SD ↑
  + mean f0 ↑ - f0-SD ↓
  + mean f0 ↓ - f0-SD ↑
  + mean f0 ↓ - f0-SD ↓
* mean f0 and formants
  + mean f0 ↑ - Df ↑
  + mean f0 ↑ - Df ↓
  + mean f0 ↓ - Df ↑
  + mean f0 ↓ - Df ↓
* f0-SD and formants
  + f0-SD ↑ - Df ↑
  + f0-SD ↑ - Df ↓
  + f0-SD ↓ - Df ↑
  + f0-SD ↓ - Df ↓

## By how much to manipulate each parameter

* Within sex standard deviation? ❌
* Is there research on hearing in babies? What can they perceive? ❌
* Sample of IDS recordings select mean ones (I prefer this one) ✅❌

# Study 2

* Elicit IDS
* Analyse voice from videos of the mother (perhaps also father and any main caregiver)

## Measurments

### Musicality

* <https://peretzlab.ca/online-test-material/material/mbema/> (4 a 6 años)✅
  + Peretz, I., Bolduc, J., & Couvignou, M. (2021). *Montreal Evaluation of Musical Abilities on tablet for 4 to 6-year-old children*. <https://doi.org/10.23668/psycharchives.5112>
* <https://giamusic.com/resource/primary-measures-of-music-audiation-kgrade-3-complete-kit-pmma-instrumentaccessory-g2242k> ❌
* Toddler Musical Behavior Questionnaire
  + Politimou N, Stewart L, Müllensiefen D, Franco F. (2018) Music@Home: A novel instrument to assess the home musical environment in the early years. *PLoS One. 13*(4), e0193819. <https://doi.org/10.1371/journal.pone.0193819>
    - Publicación original: Musical Child Questionnaire (MCQ)
  + Buren V, Müllensiefen D, Roeske TC and Degé F (2021) What Makes Babies Musical? Conceptions of Musicality in Infants and Toddlers. *Front. Psychol.* *12*, 736833. <https://doi.org/10.3389/fpsyg.2021.736833>
    - Adaptación para niños de menos de 3 años: Musical Child Questionnaire for children under 3 years (MCQ\_U3)
    - Schaal NK, Politimou N, Franco F, Stewart L, Müllensiefen D (2020) The German Music@Home: Validation of a questionnaire measuring at home musical exposure and interaction of young children. *PLoS ONE 15*(8), e0235923. <https://doi.org/10.1371/journal.pone.0235923>
* Considerar:
  + Controlar habilidades musicales de papás
  + No escolarizados
  + Sin hermanos (o controlar eso)
  + Controlar quién es el cuidador principal (y quién era cuando era bebé)

**Habilidades lingüísticas:**

* XXX

## **Datos simulación *eye-tracking*:**

* 5s ← 50 +- 15% de atención en el estímulo (Tenenbaum, E. J., Sobel, D. M., Sheinkopf, S. J., Malle, B. F., & Morgan, J. L. (2015). Attention to the mouth and gaze following in infancy predict language development. *Journal of Child Language*, *42*(6), 1173–1190. <https://doi.org/10.1017/S0305000914000725>)
* De ese porcentaje, 40 +- 20% en la boca
* Cuando hay mayor atención, sube 10+- 20%