

Motor Milestone Analysis

We examine whether the SAYcam participants' age at which they started walking significantly influenced the proportion of hands or faces that they saw, using mixed-effects regressions with per-child random intercepts. We tried including random slopes by age and milestone, but the models did not converge and/or were singular. The R syntax for the linear regression was thus: `prop_faces ~ age * walk + (1 | child_id)`. We also tested inclusion of a quadratic term for age (`prop_faces ~ poly(age,2) * walk + (1 | child_id)`). Children's age of achieving the milestone was dummy-coded (i.e., 0=unable to walk; 1=able to walk).

The quadratic term was justified for both the hands model ($\chi^2(2) = 22.15$, $p < .001$) and the faces model ($\chi^2(2) = 10.21$, $p < .01$). As children became able to walk, they saw significantly more faces ($\beta = 0.26$, $p = 0.02$) and hands ($\beta = 0.32$, $p = 0.01$). The linear and quadratic age terms and their interactions with walking were also significant (see Table 1). The models' predicted conditional effects are shown in Figure 1.

Table 1: Change in face and hand prevalence by ability to walk

	<i>Dependent variable:</i>	
	Proportion of Faces	Proportion of Hands
	(1)	(2)
poly(age, 2)1	-4.831** (1.928)	-5.655*** (2.080)
poly(age, 2)2	-1.986** (0.845)	-2.462*** (0.913)
walk	0.259** (0.109)	0.315*** (0.118)
poly(age, 2)1:walk	4.506** (1.934)	5.532*** (2.088)
poly(age, 2)2:walk	1.723** (0.854)	1.986** (0.923)
Constant	-0.070 (0.109)	-0.080 (0.118)
Observations	235	235
Log Likelihood	293.848	276.626
Akaike Inf. Crit.	-571.697	-537.253
Bayesian Inf. Crit.	-544.020	-509.576

Note:

*p<0.1; **p<0.05; ***p<0.01

walk ■ 0 ■ 1

