Supplementary Figure 1

***De novo* variant continuum without the ExAC filter.**

P values were derived from Poisson regression. LoF, loss of function; DCM, probably damaging constrained missense; ExAC, Exome Aggregation Consortium.

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SUPPLEMENTARY TABLES

Supplementary Table 1. Data source

	Data source	N	Availability
Primary Genetic Correlation Analyses: ASDs and social communication variation in the population	PGC Autism	5,305 cases; 5,305 pseudocontrols	Summary statistics publically available from PGC website
	iPSYCH Autism	7,783 ASD cases; 11,359 matched controls	Pre-publication consortium data; for questions email mjdaly@atgu.mgh.harvard.edu and anders@biomed.au.dk
	ALSPAC - SCDC	5,628 general population, mean age 8 years	Primary data accessible following approved application to ALSPAC executive committee
Secondary Genetic Correlation Analyses	Child Full Scale IQ	12,441 general population individuals	Summary statistics publically available from Benyamin et al. 2014
De novo variant analyses	SSC	2,508 ASD cases; 1,911 unaffected sibling controls	Phenotypic data publically available from the Simons Foundation; *de novo* variant calls from Iossifov 2014
	ExAC	60,706 individual exomes	Publically available from the Exome Aggregation Consortium

Note: PGC=Psychiatric Genomics Consortium; iPSYCH Autism= The Lundbeck Foundation Initiative for Integrative Psychiatric Research (iPSYCH) Autism GWAS; ALSPAC=Avon Longitudinal Study of Parents and Children; SCDC= Social and Communication Disorders Checklist; IQ=Intelligence Quotient; SSC = Simons Simplex Collection; ExAC= Exome Aggregation Consortium.

Supplementary Table 2. Genetic correlations between ASD risk and IQ in the general population

	Constrained Intercept r_g (se), p	Intercept not constrained r_g (se), p
PGC-ASD v. Child IQ	0.402 (0.088), p=5.273e-06	0.300 (0.126), p=0.018
iPSYCH ASD v. Child IQ	0.139 (0.068), p=0.04	0.168 (0.100), p=0.09

Supplementary Table 3. LD score genetic correlation estimates with and without intercept constraint

	Constrained Intercept r_g (se), p	Intercept not constrained r_g (se), p
PGC-ASD v. SCDC	0.274 (0.100), p=0.006	0.245 (0.183), p=0.179
PGC-ASD v. PGC-SCZ	0.202 (0.040), p=5.635e-07	0.181 (0.059), p=0.002
PGC-ASD v. PGC-MDD	0.139 (0.082), p=0.092	0.169 (0.131), p=0.196
PGC-ASD v. PGC-BPD	0.087 (0.058), p=0.134	0.073 (0.088), p=0.406
iPSYCH ASD v. SCDC	0.298 (0.098), p=0.002	0.544 (0.191), p=0.0045