

Simplicity and informativeness in semantic category systems

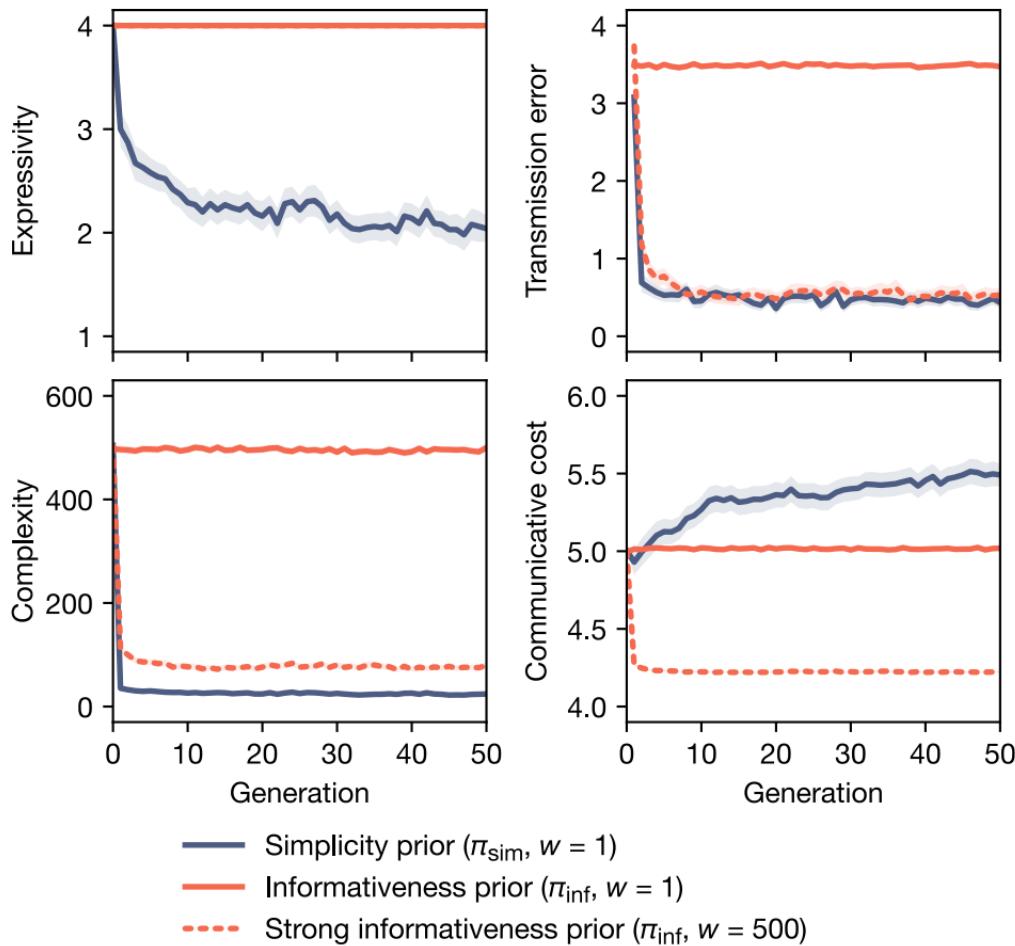
S2: All model results

Jon W. Carr, Kenny Smith, Jennifer Culbertson, Simon Kirby

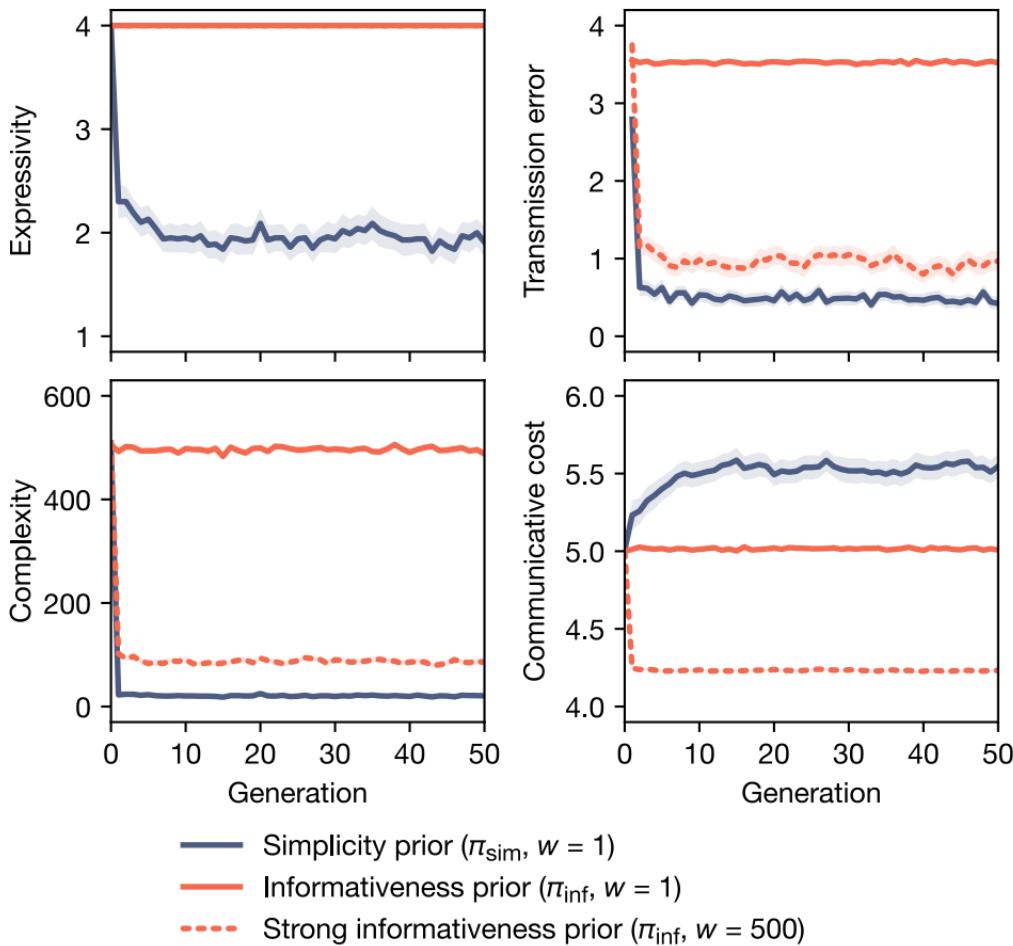
Each page in this document shows model results under particular settings of the bottleneck b , exposure level ξ , and noise level ε . Results under the three priors are given for expressivity, transmission error, complexity, and communicative cost. Each line represents the mean over 100 chains. See the main paper for more details or to explore the results more interactively, visit: <https://joncarr.net/p/shepard/>

OSF repository: <https://osf.io/hkxqp/>

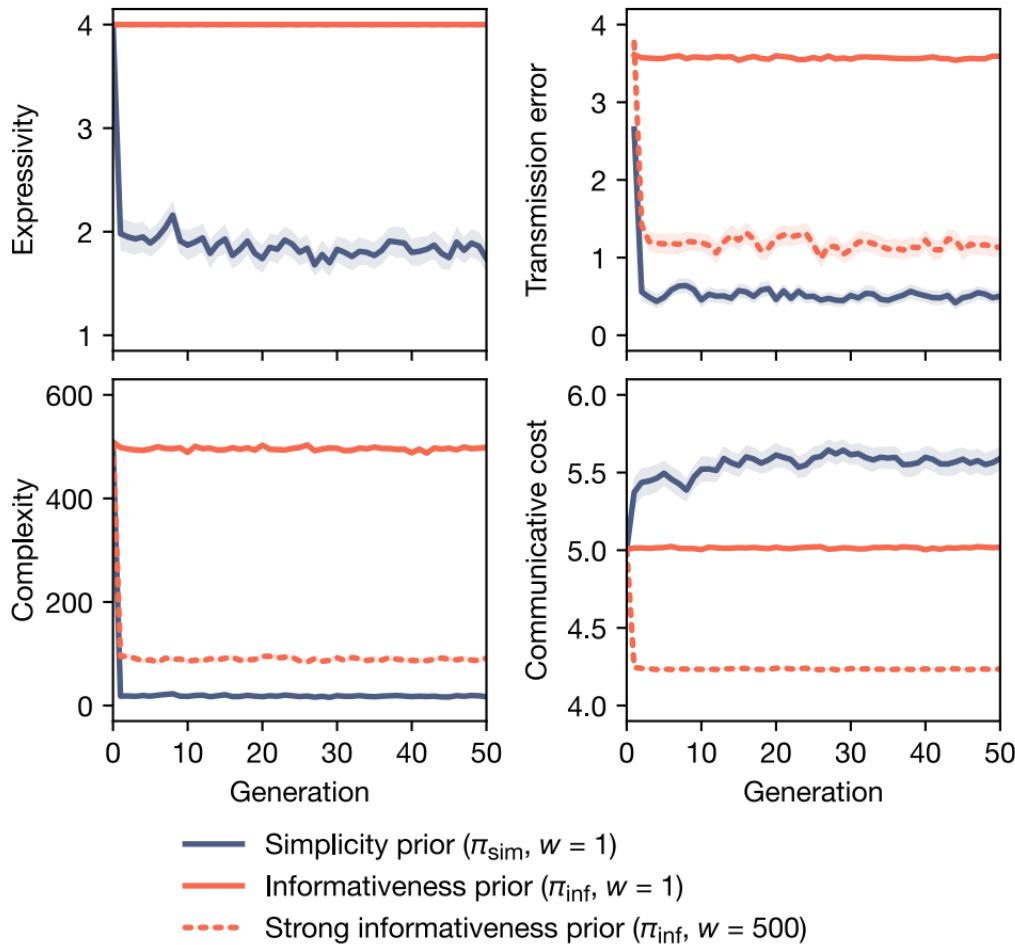
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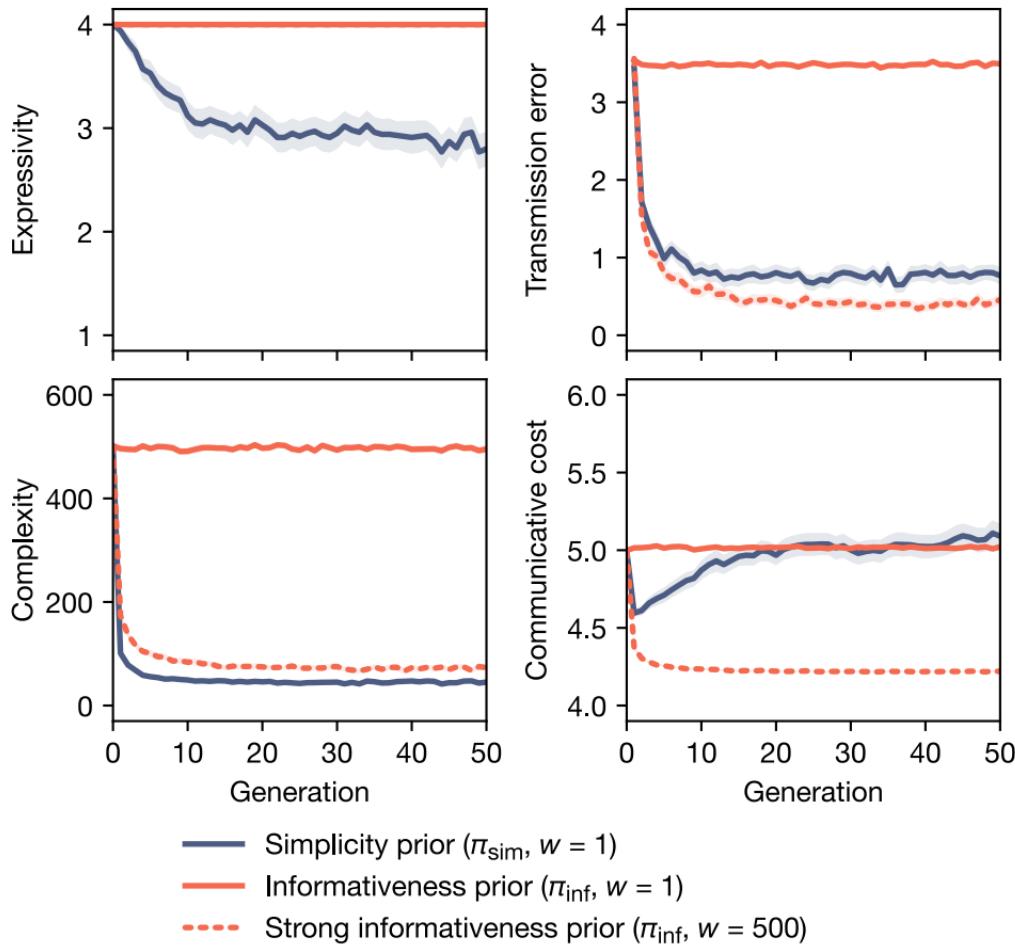
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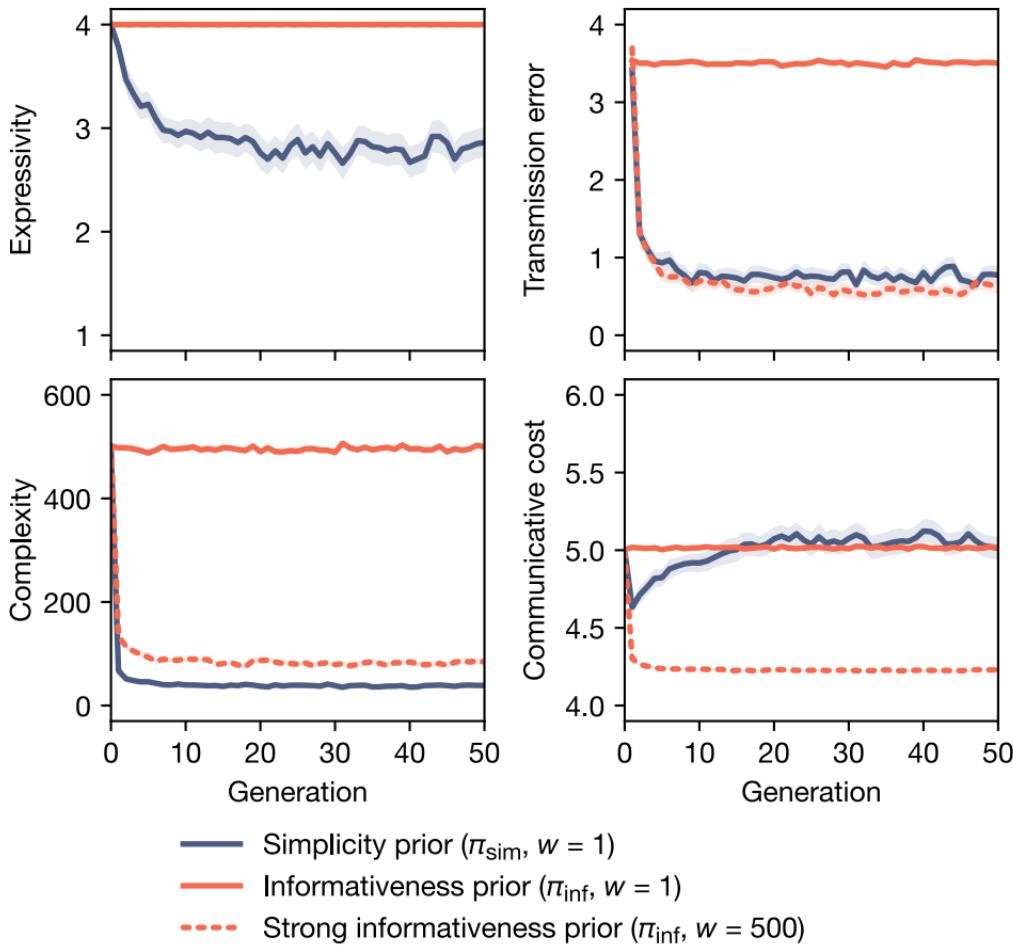
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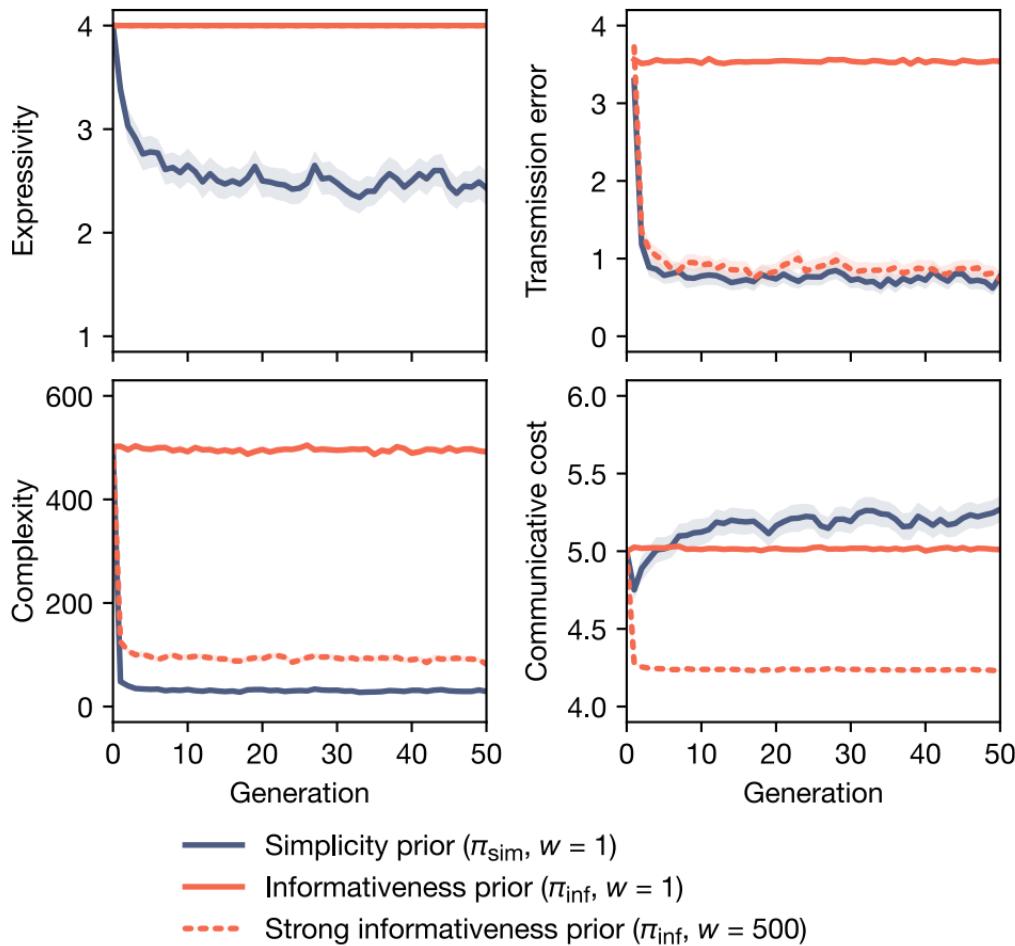
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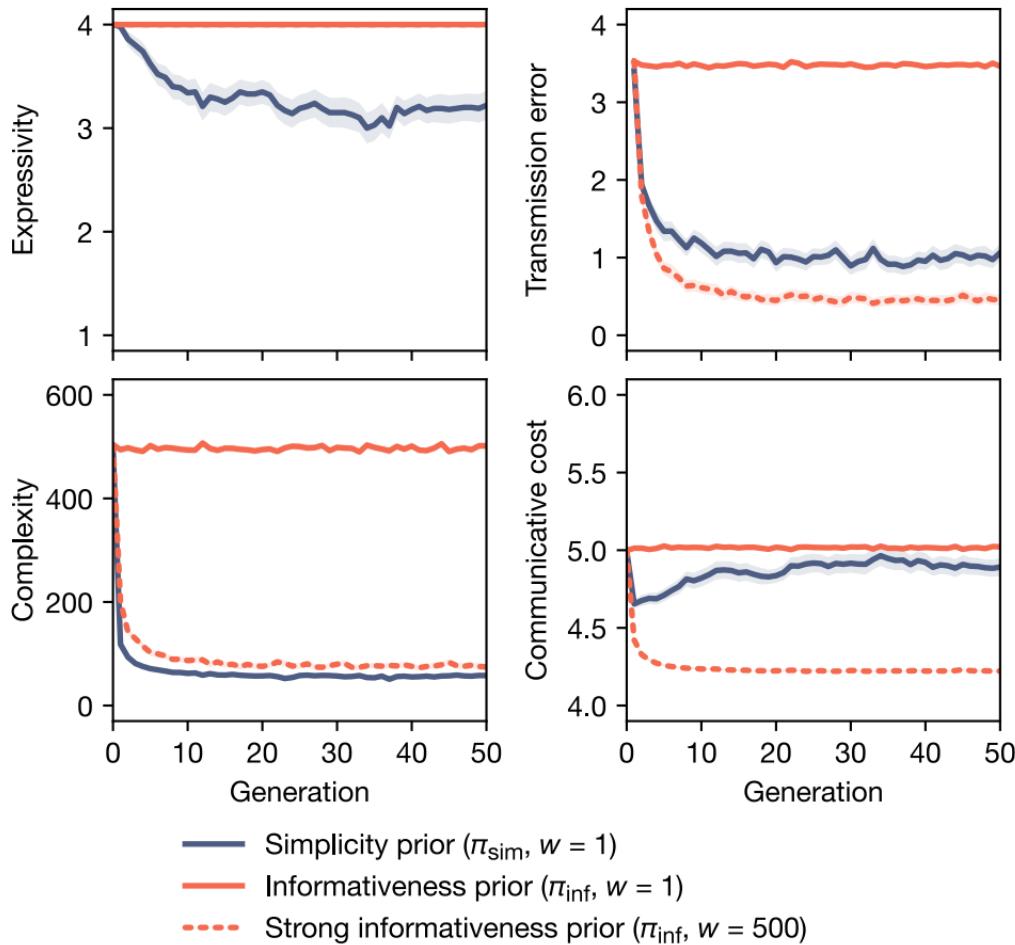
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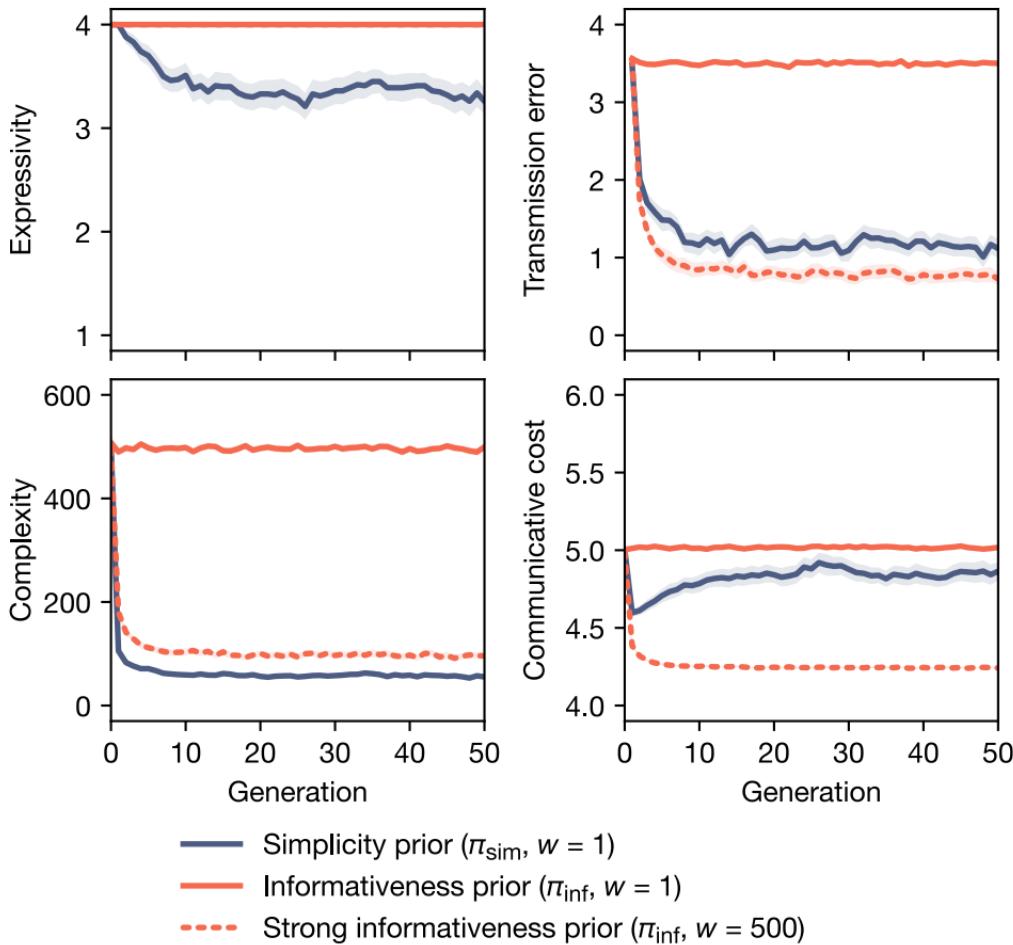
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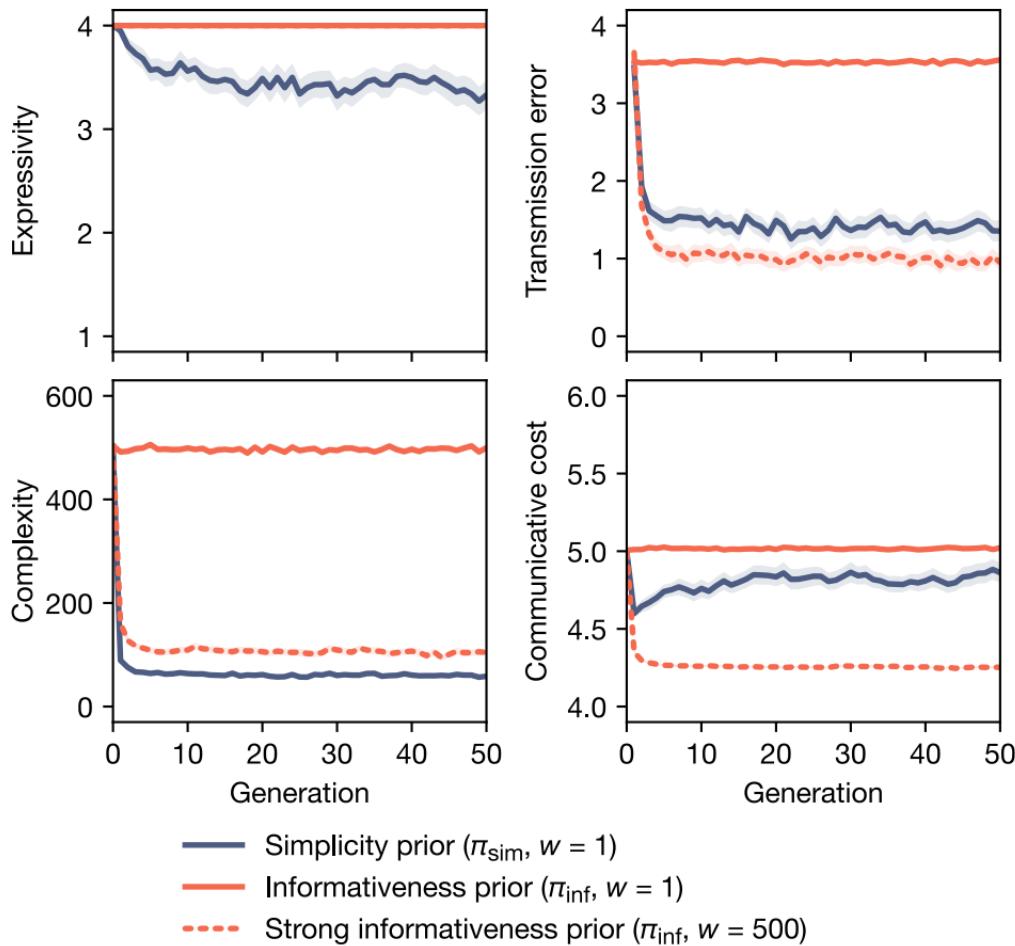
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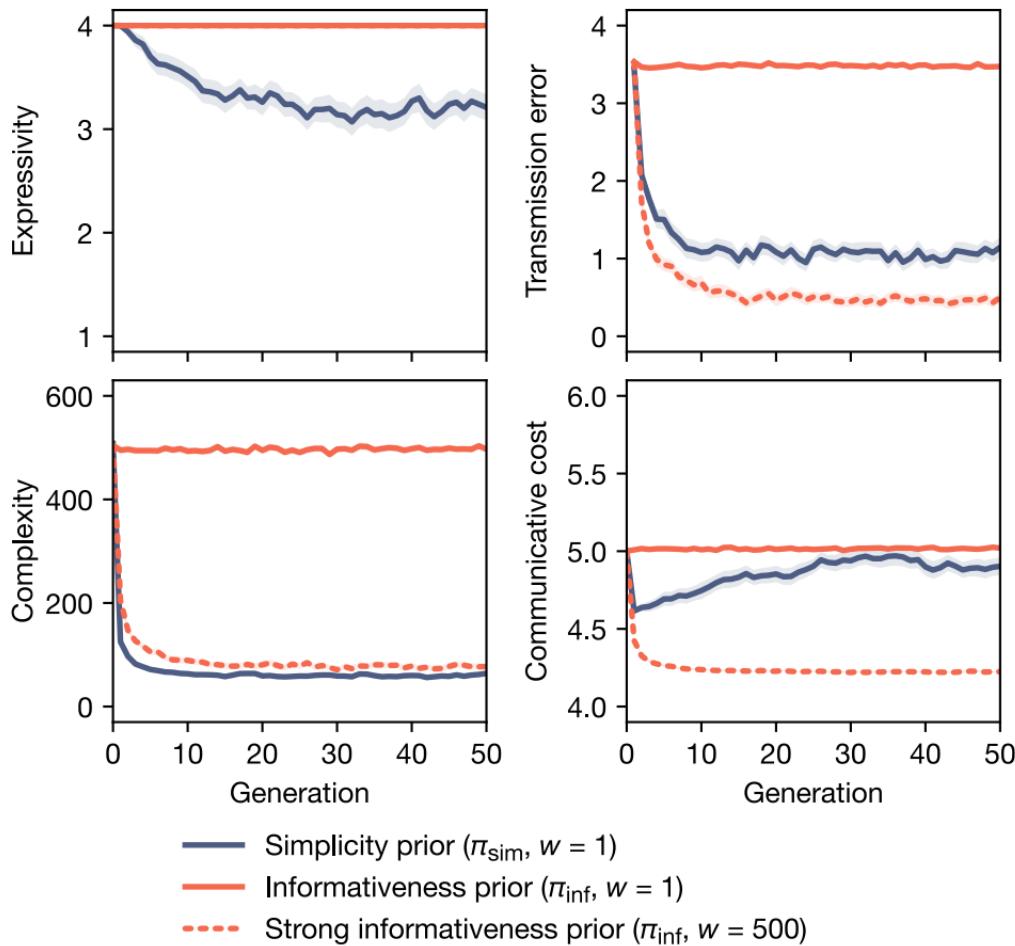
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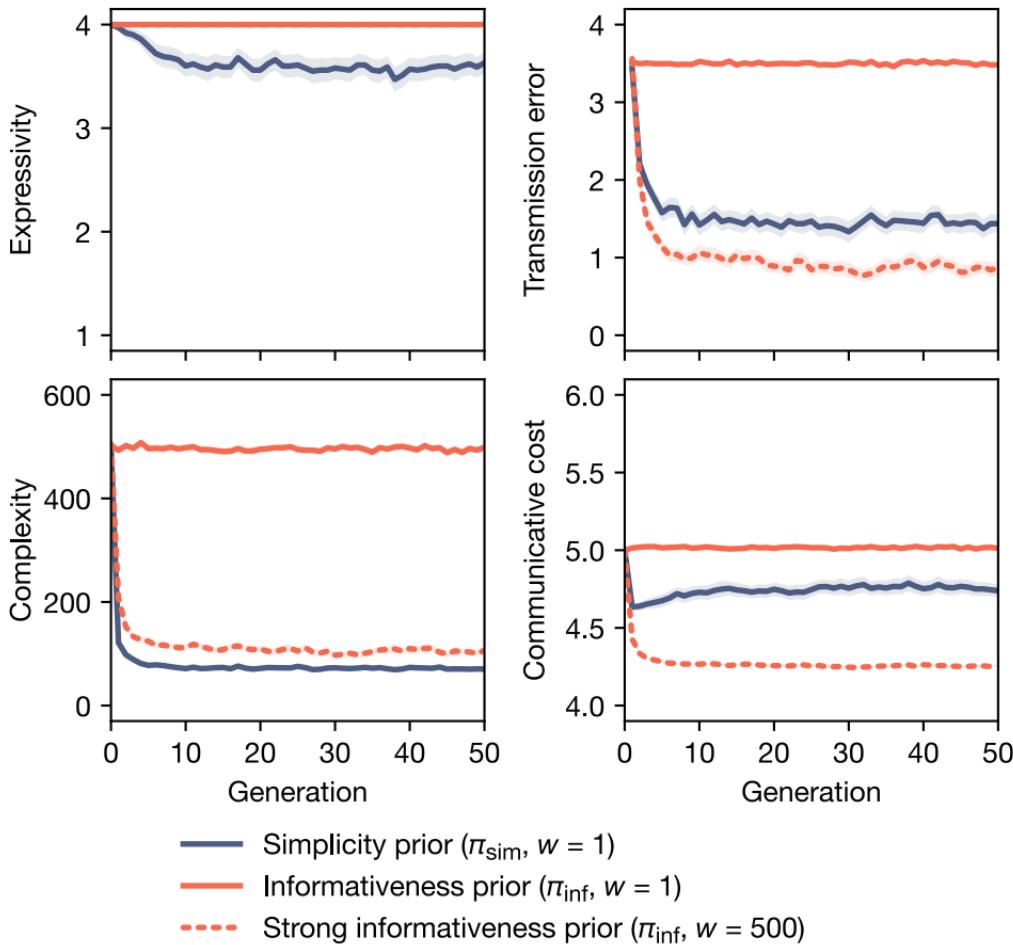
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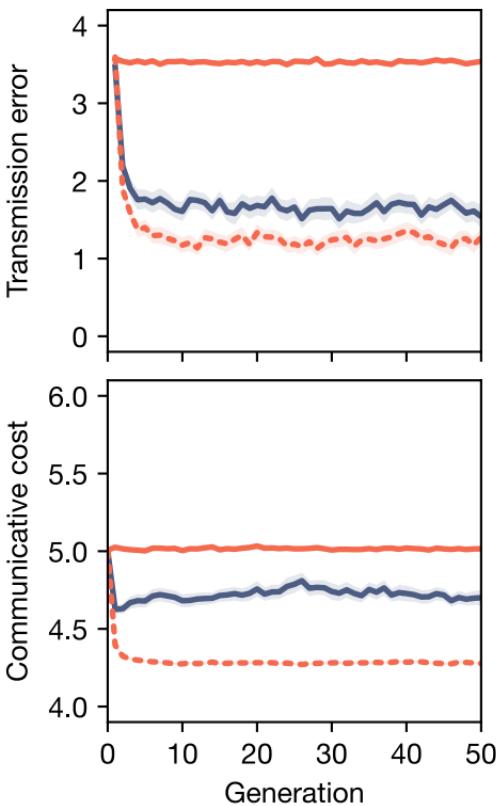
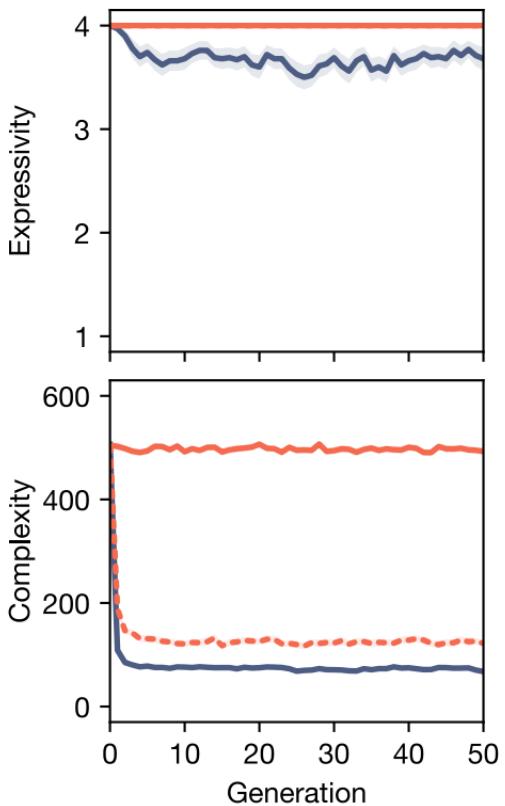
$$b = 1, \xi = 4, \varepsilon = 0.01$$



$$b = 1, \xi = 4, \varepsilon = 0.05$$

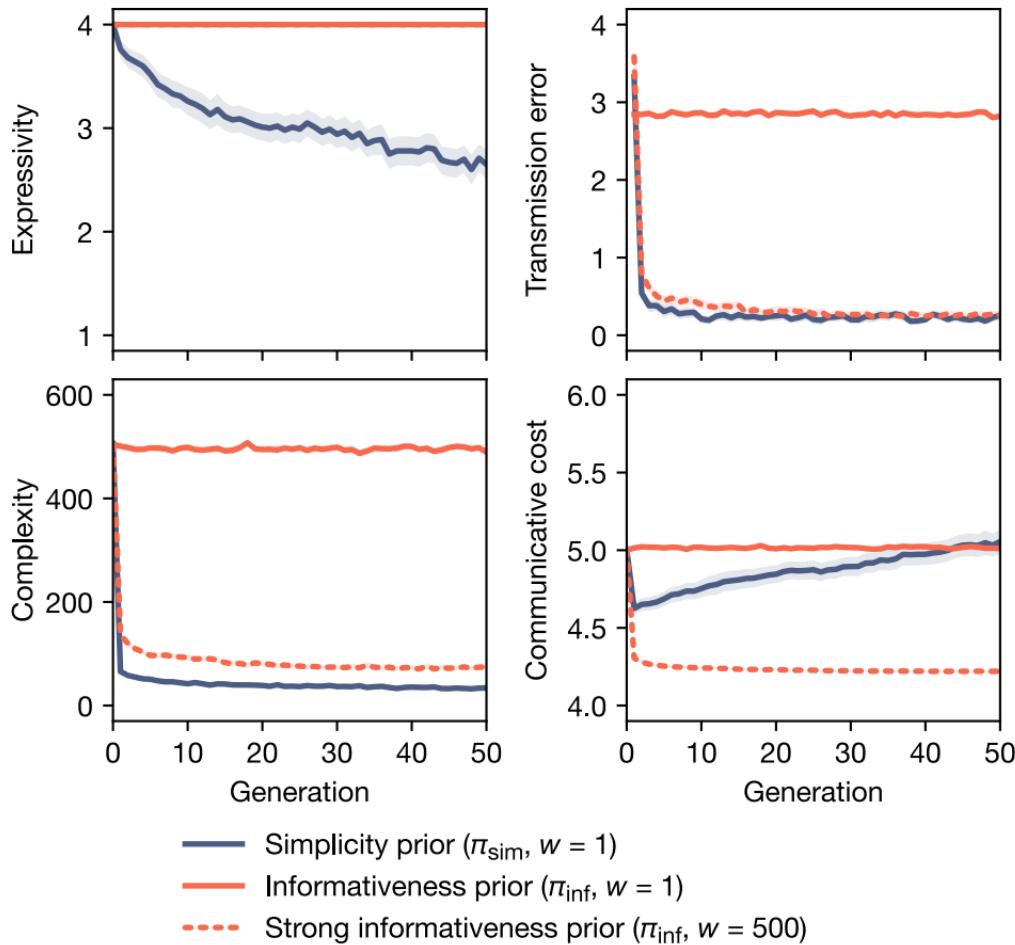


$$b = 1, \xi = 4, \varepsilon = 0.1$$

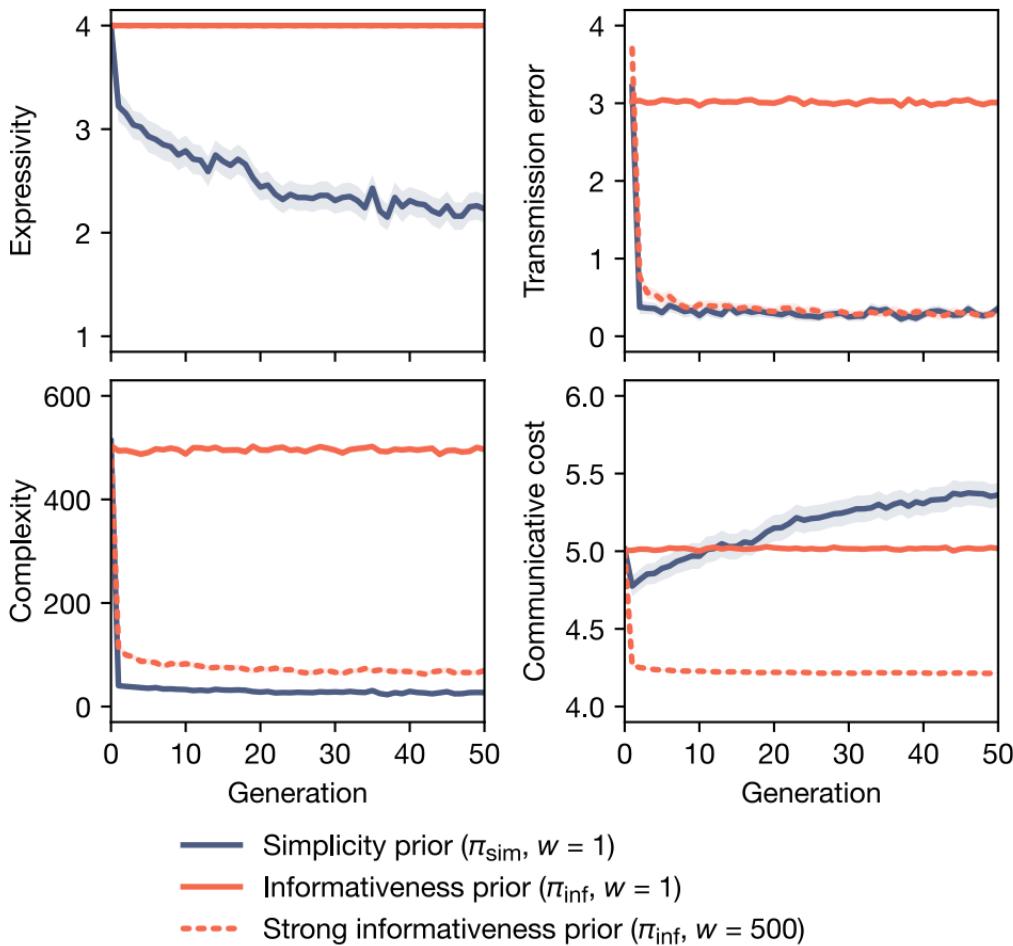


- Simplicity prior (π_{sim} , $w = 1$)
- Informativeness prior (π_{inf} , $w = 1$)
- - - Strong informativeness prior (π_{inf} , $w = 500$)

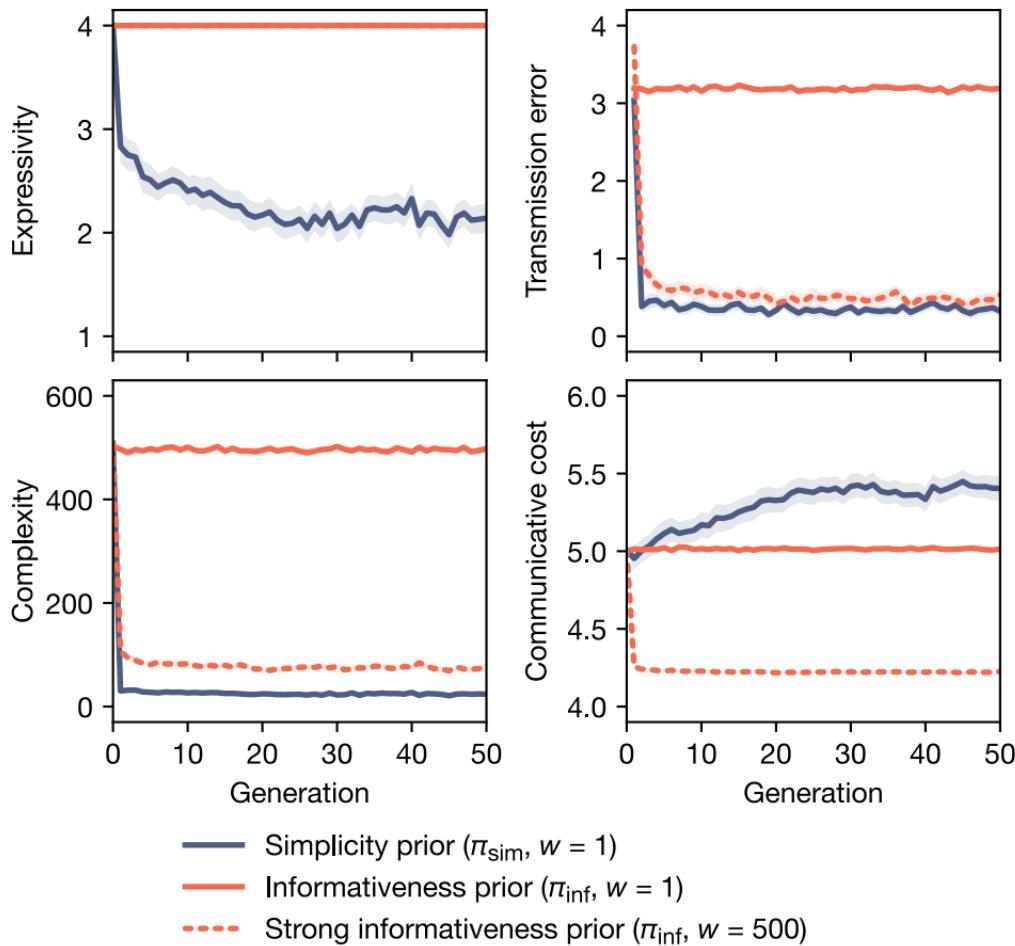
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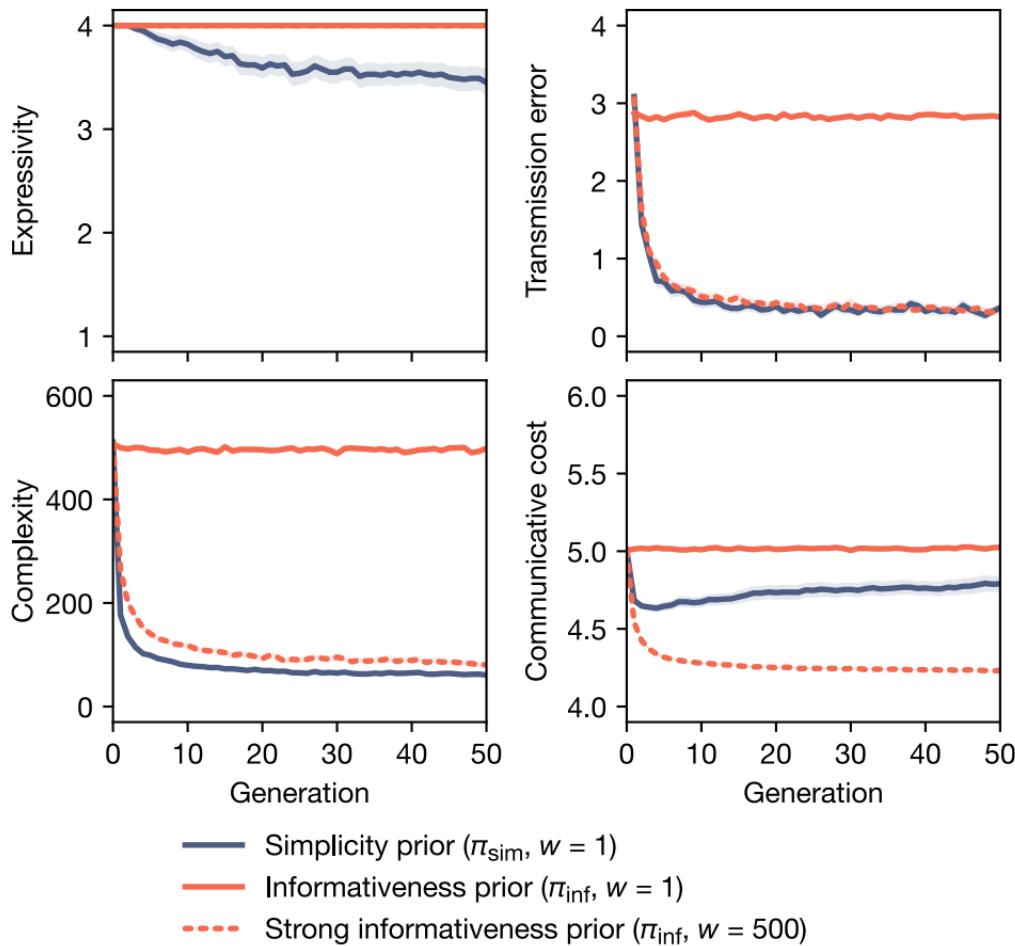
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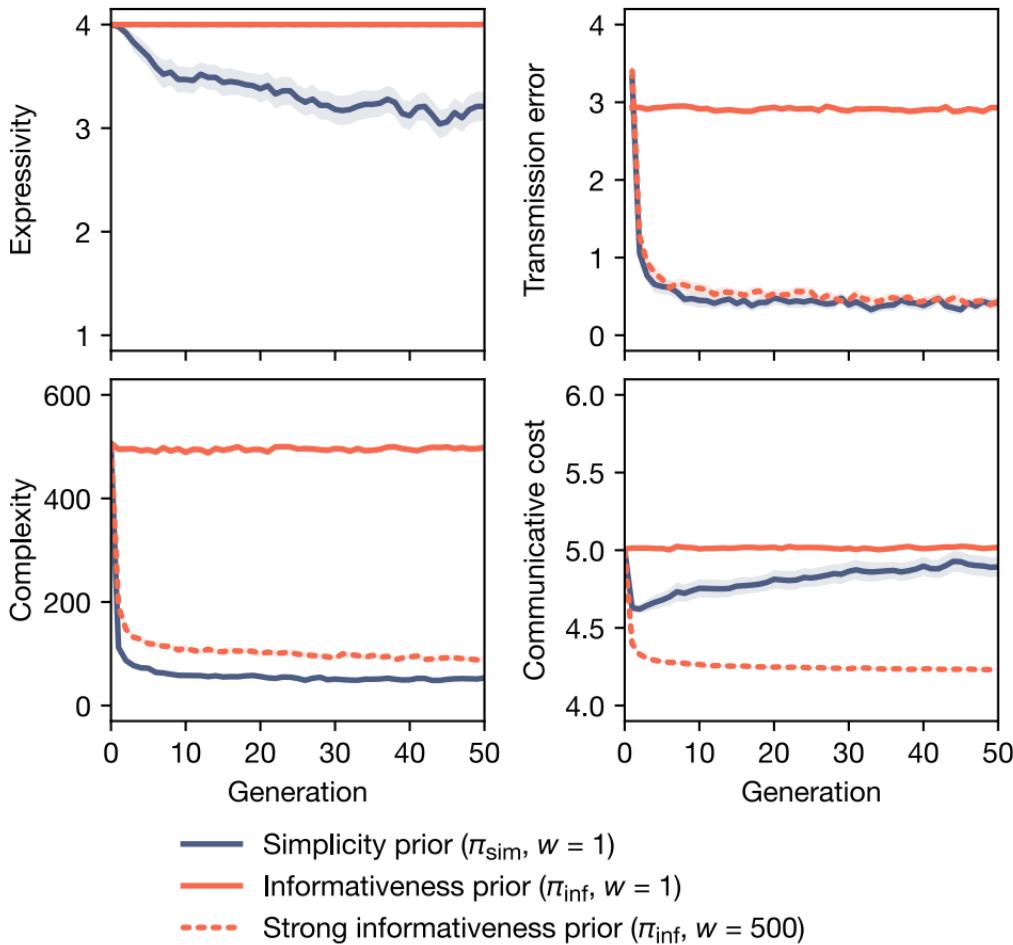
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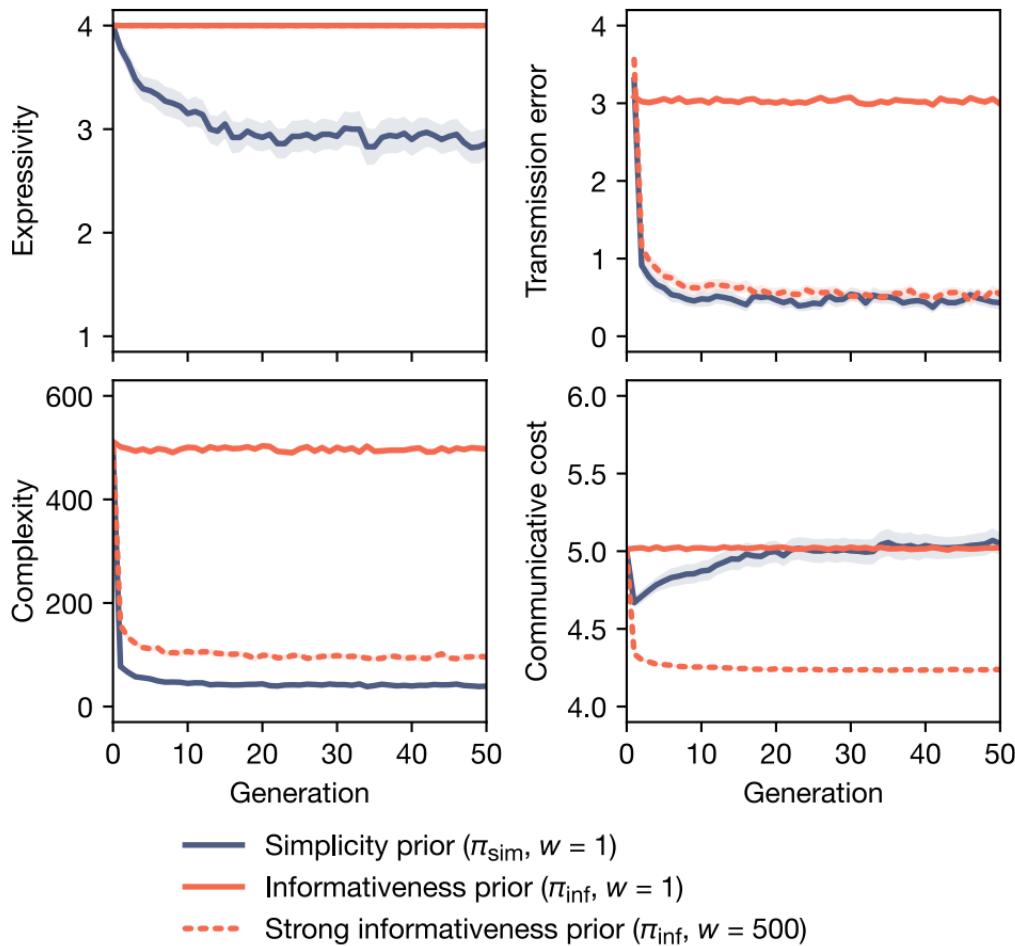
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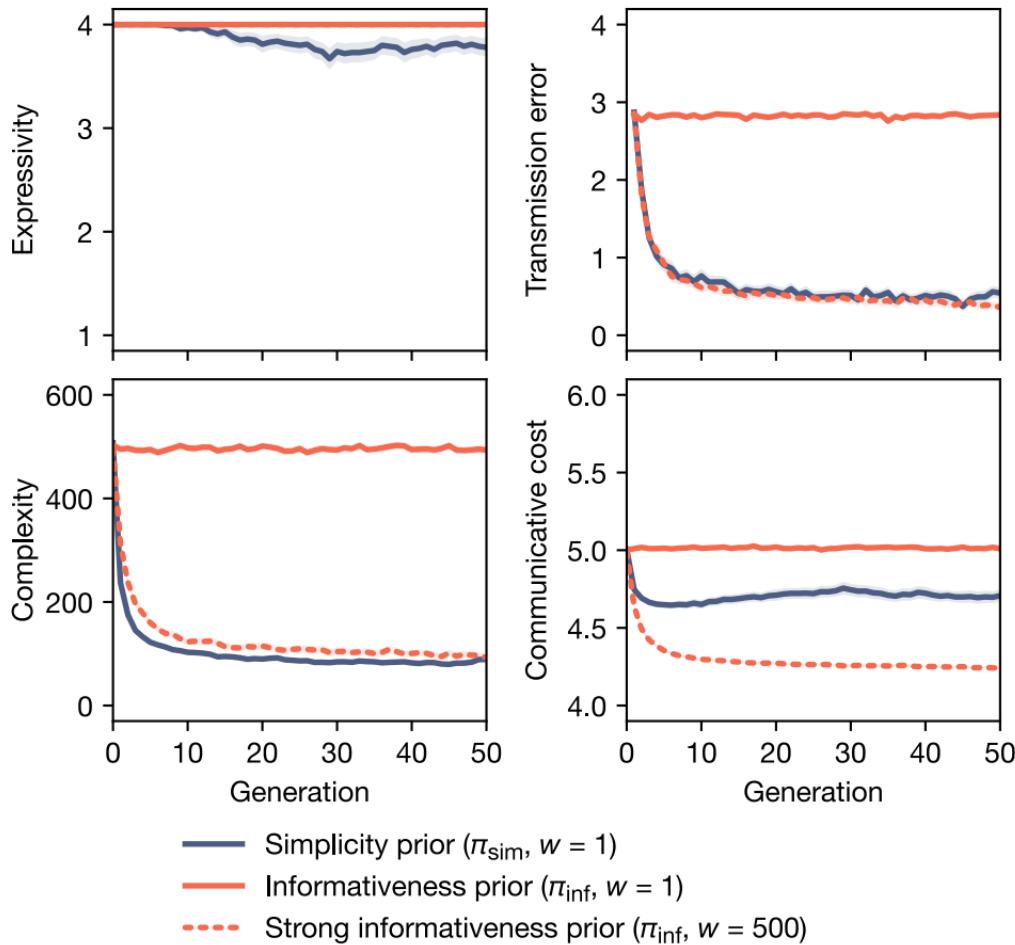
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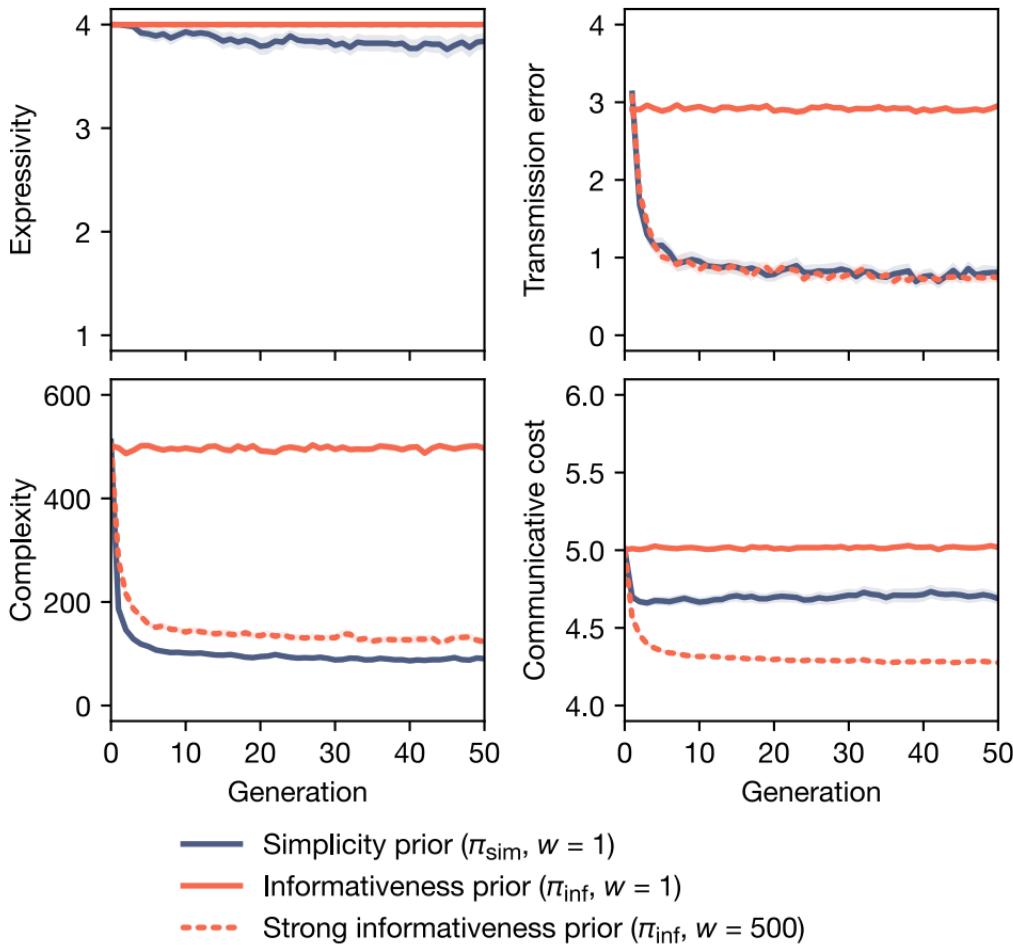
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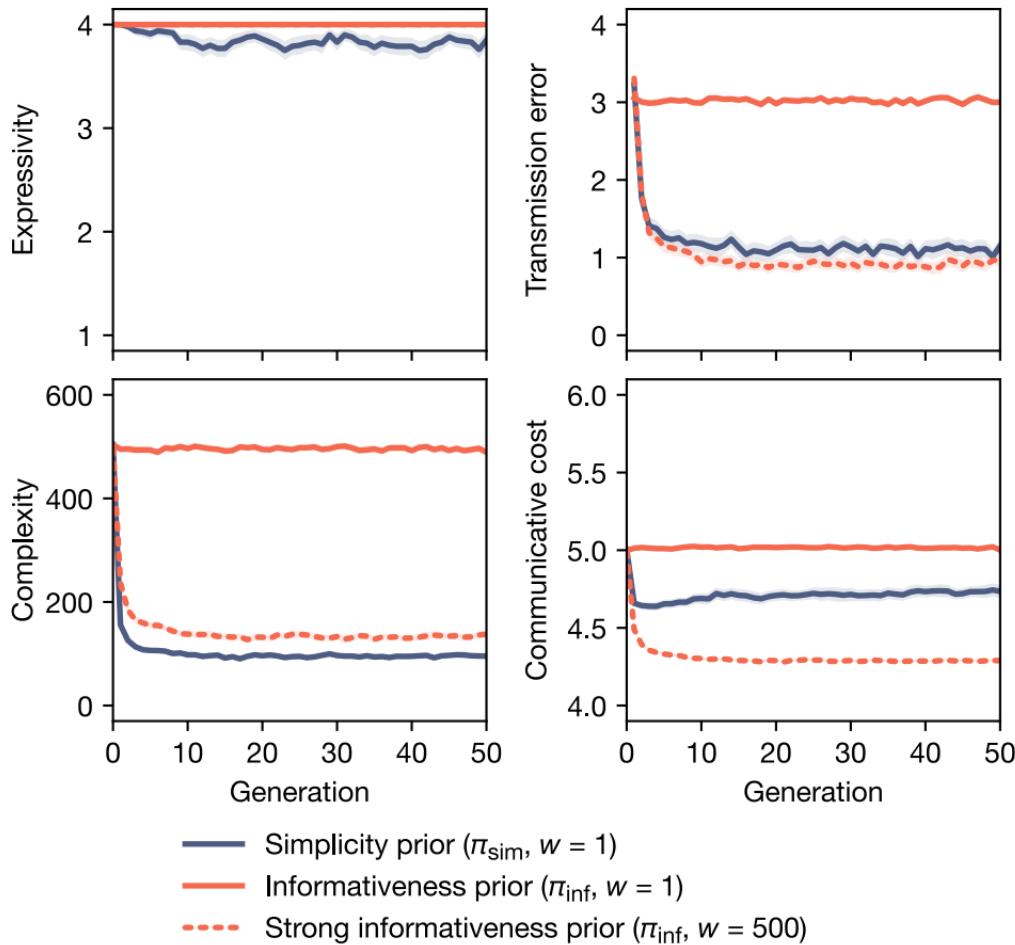
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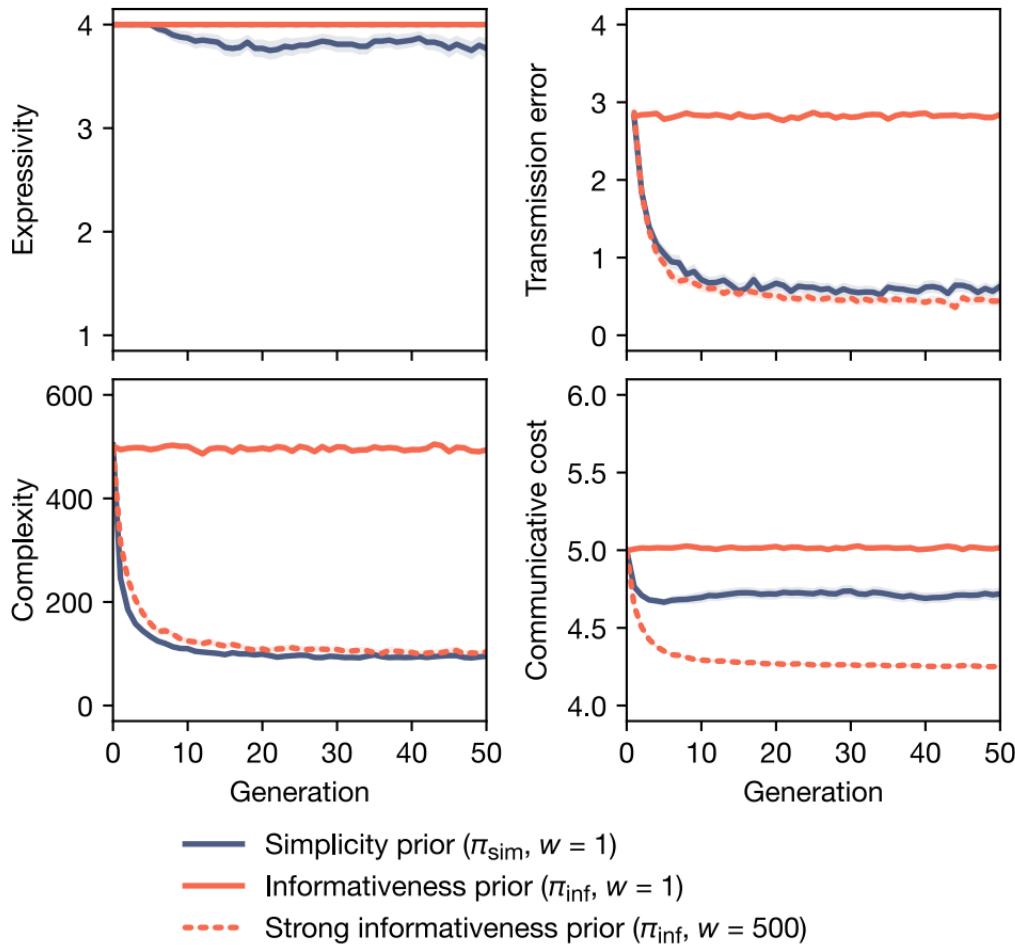
$$b = 2, \xi = 3, \varepsilon = 0.05$$



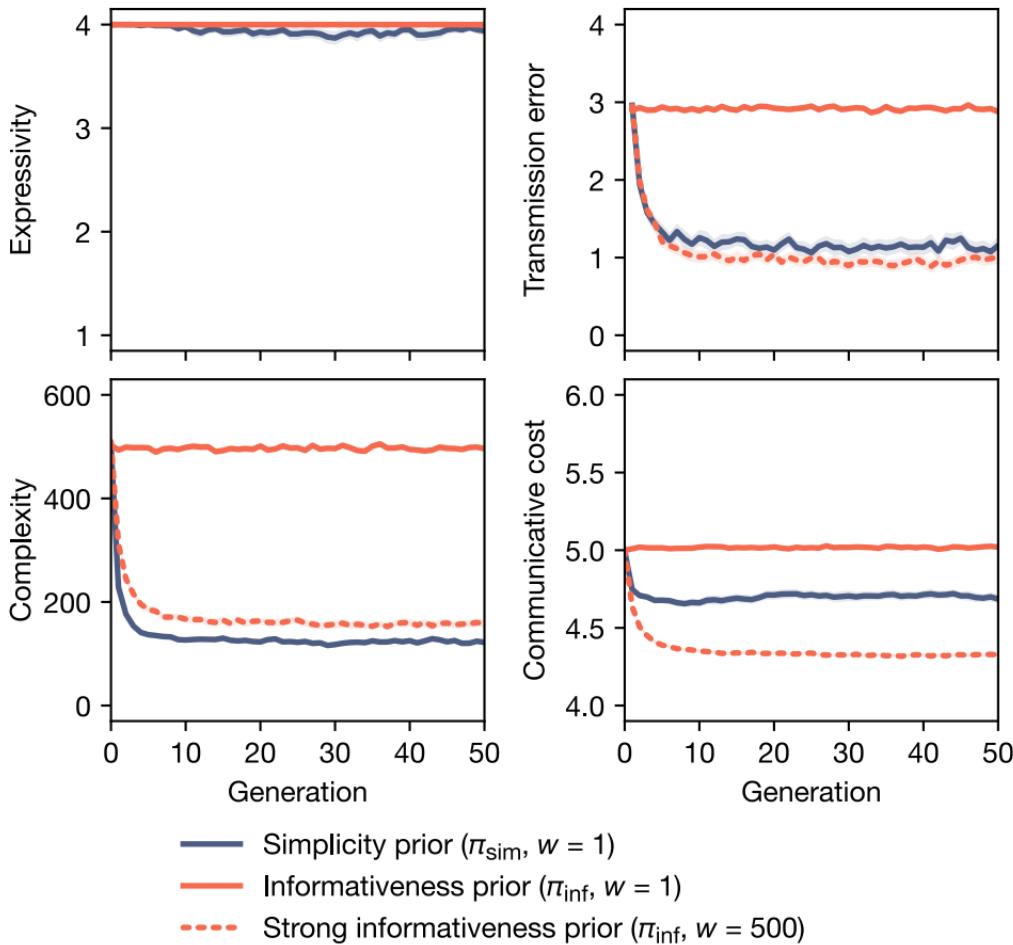
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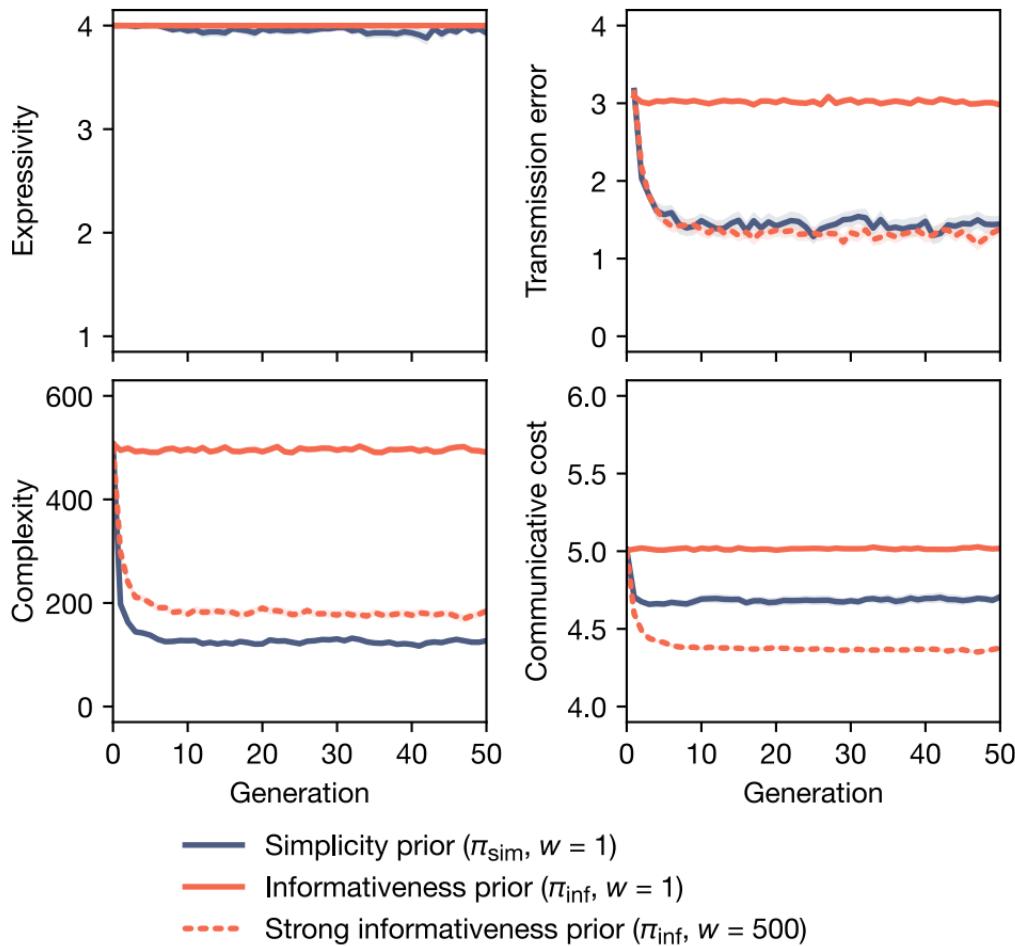
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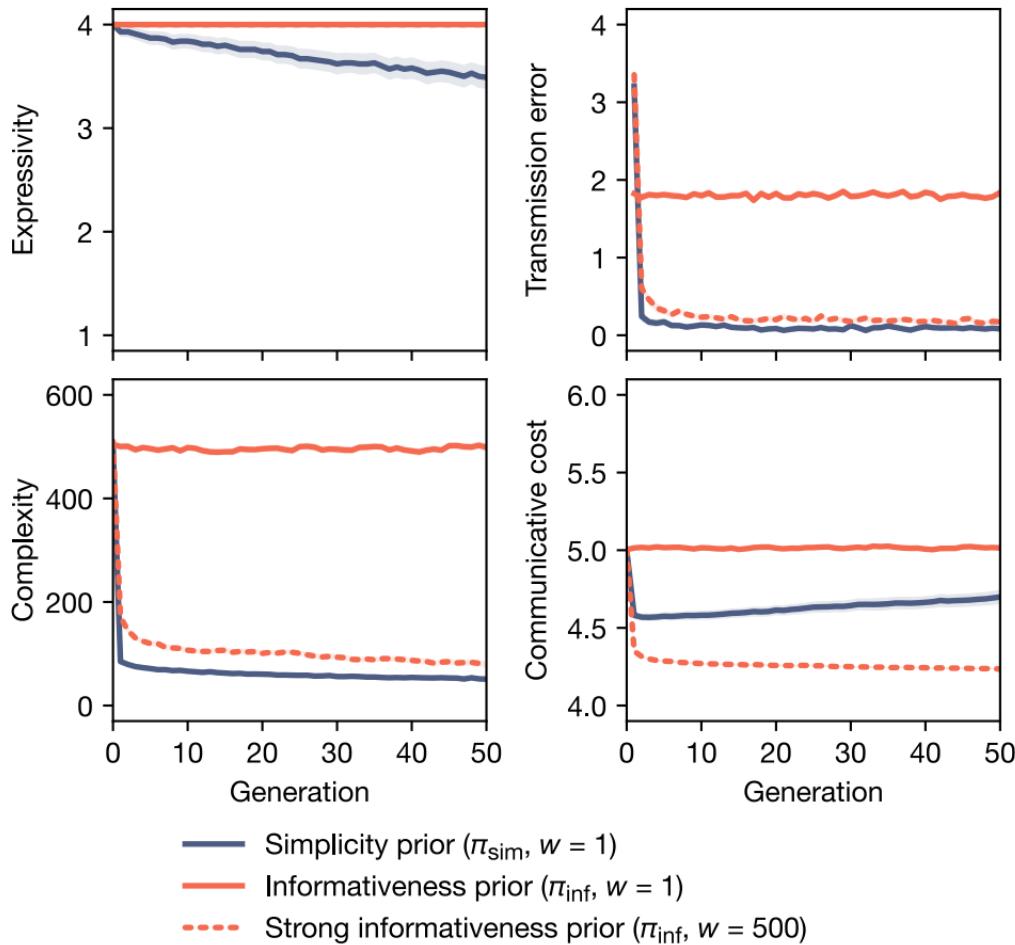
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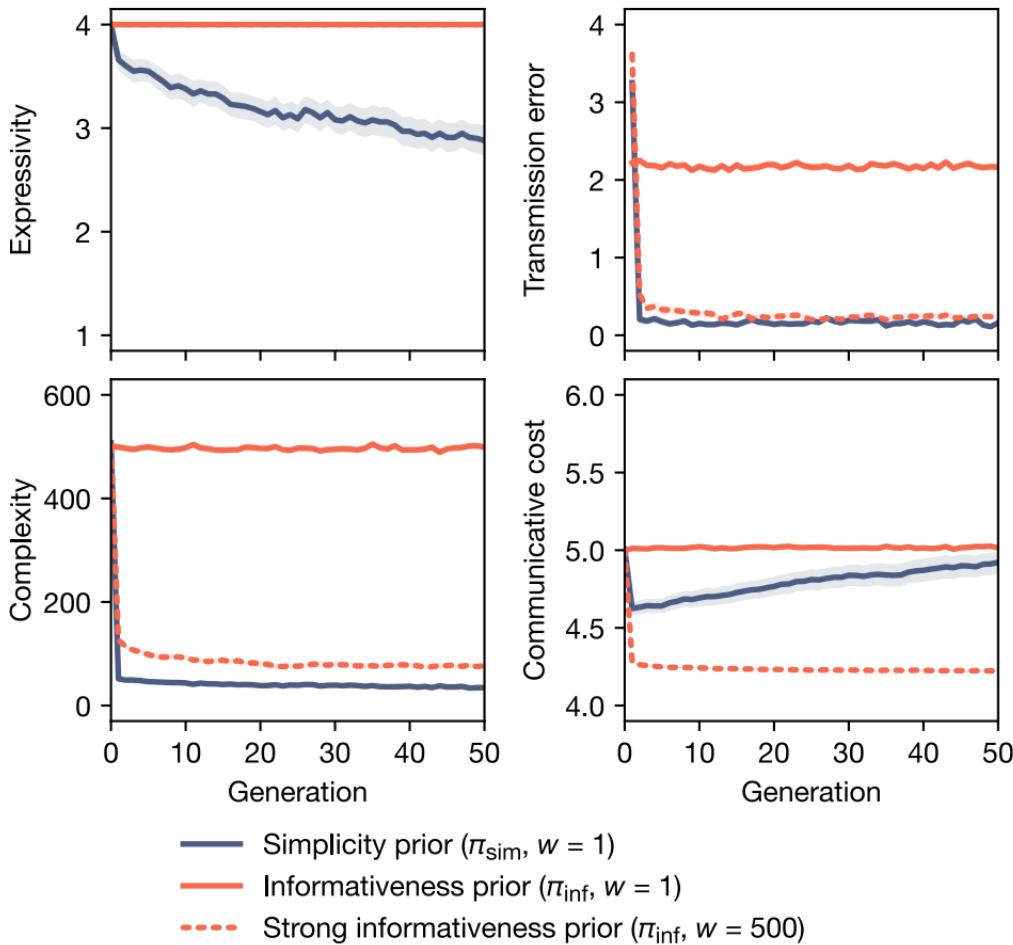
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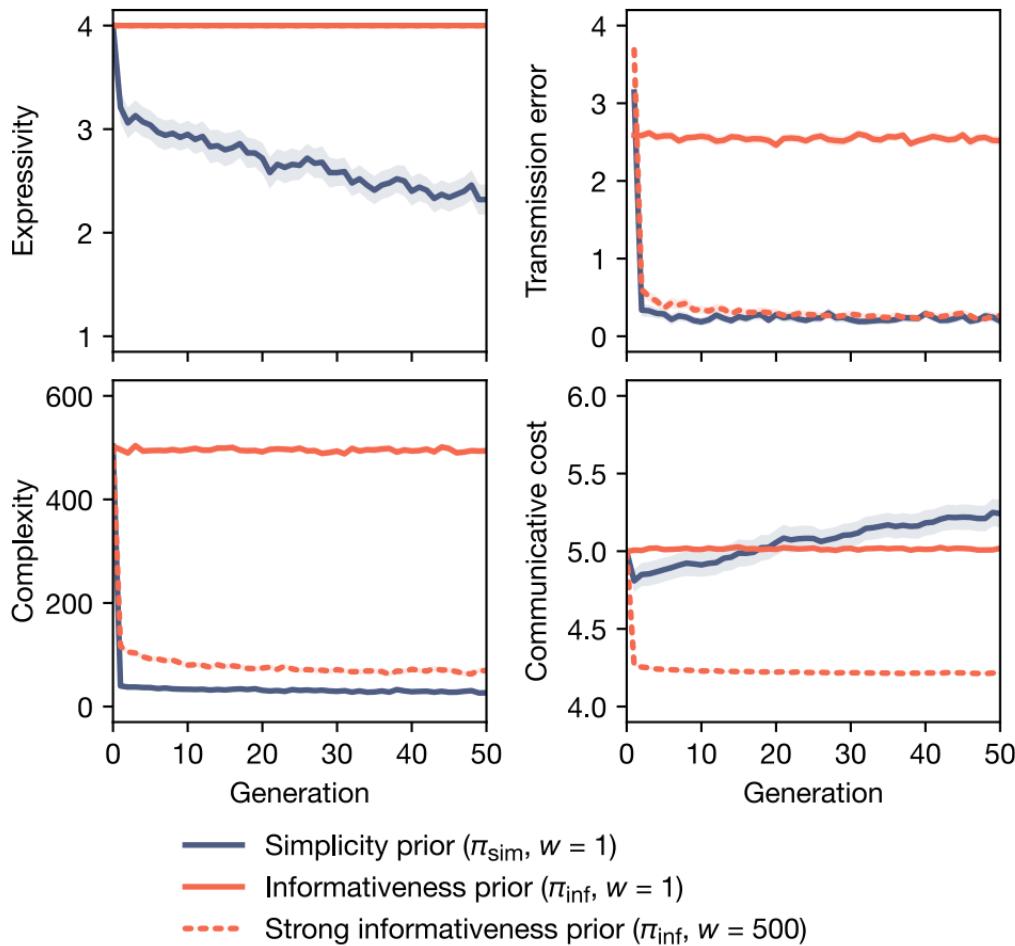
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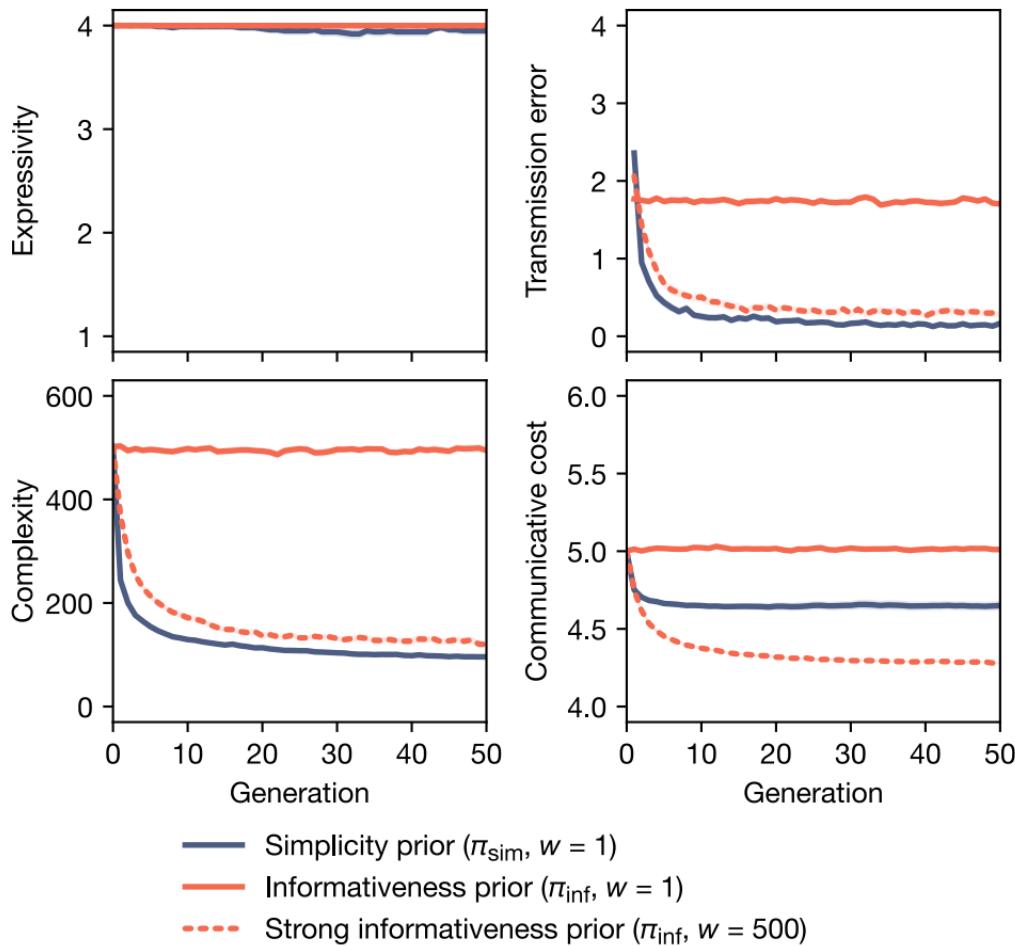
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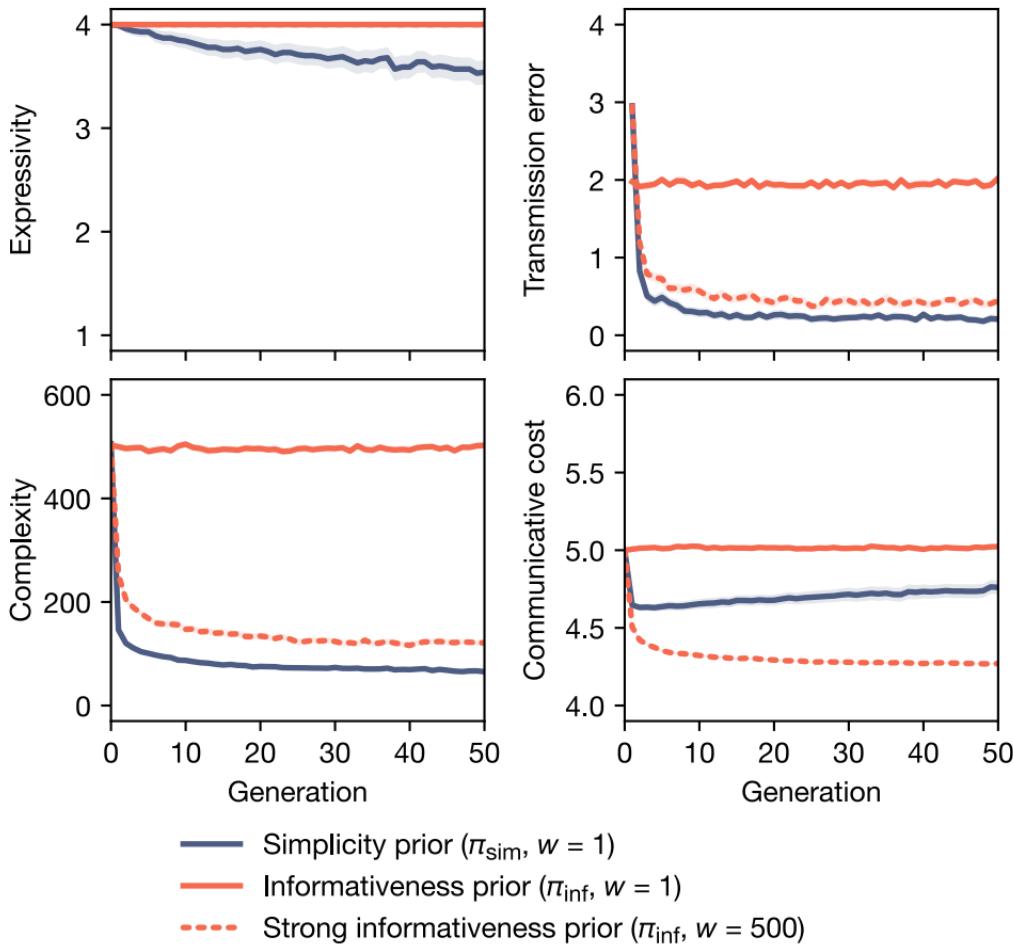
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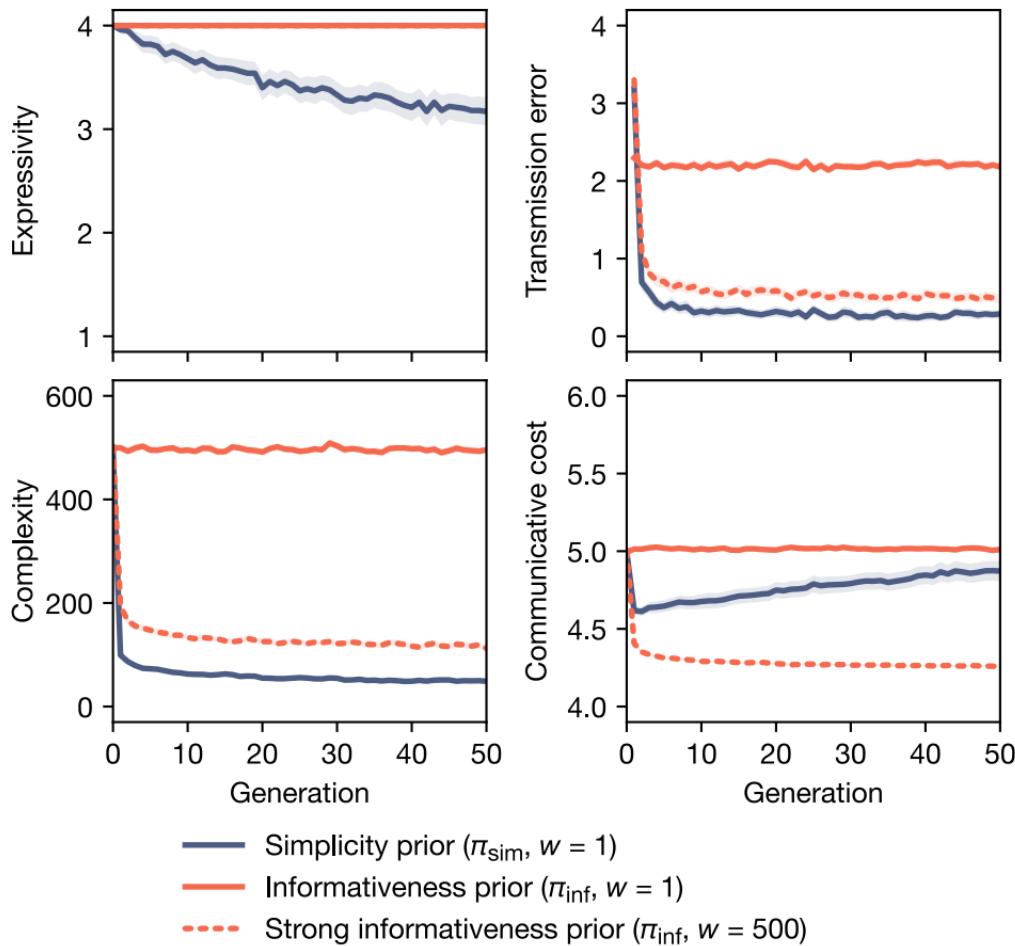
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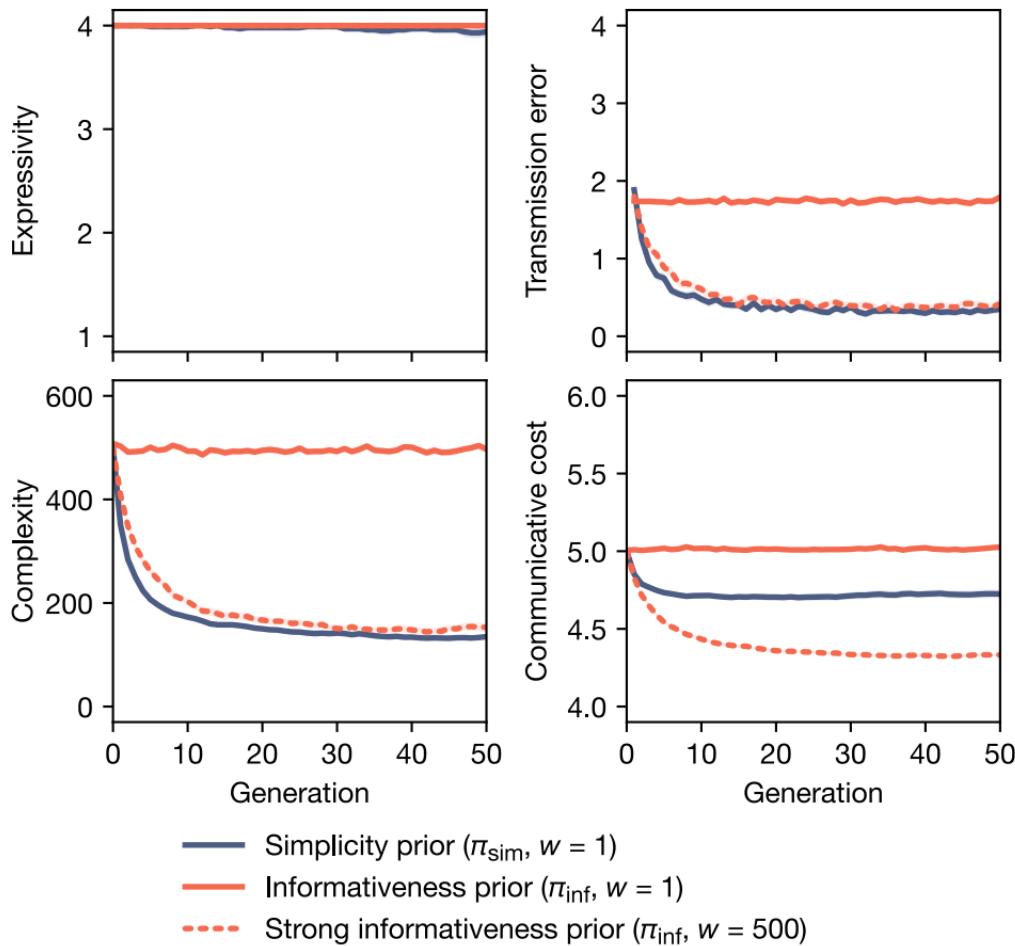
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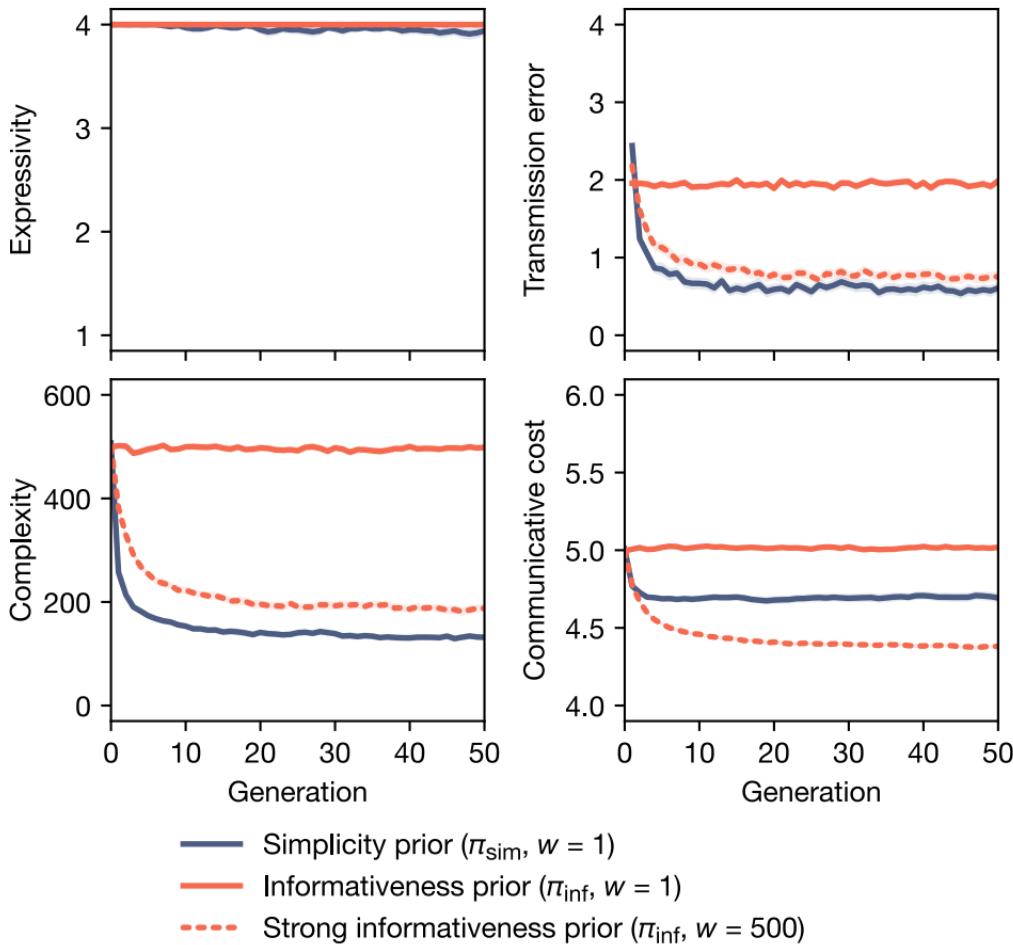
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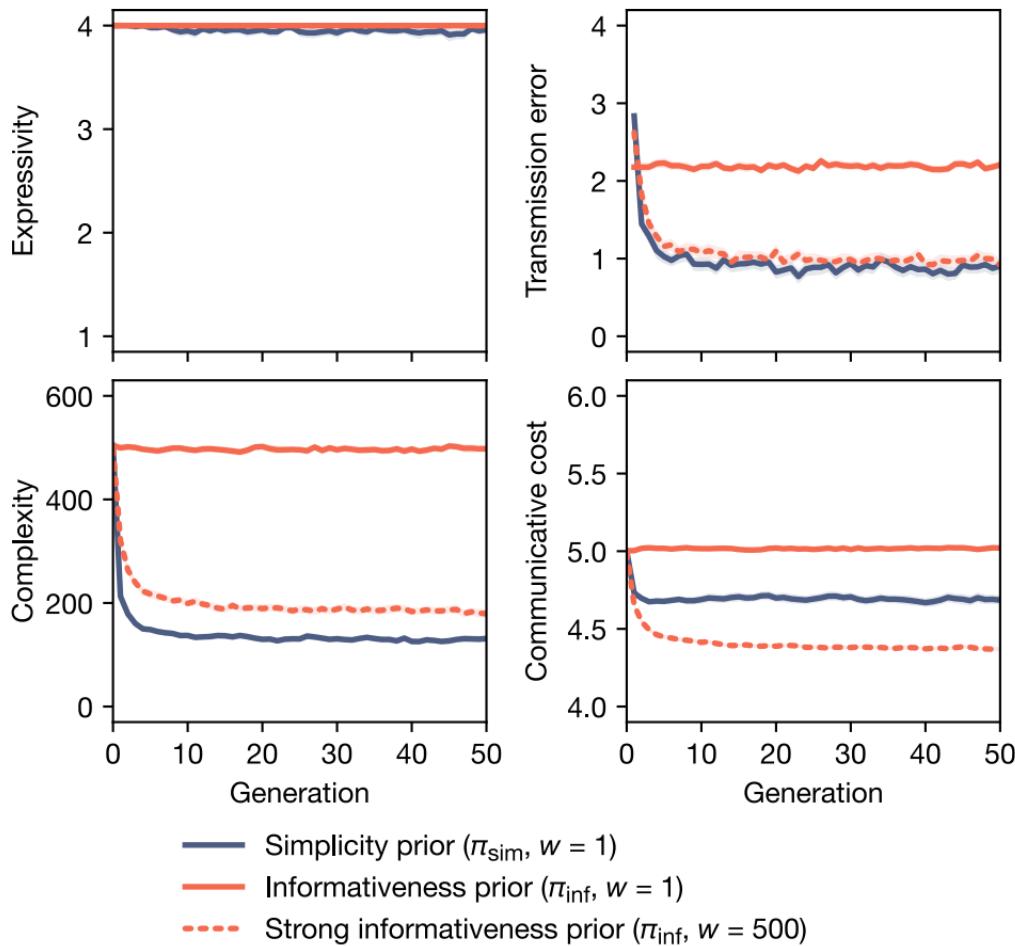
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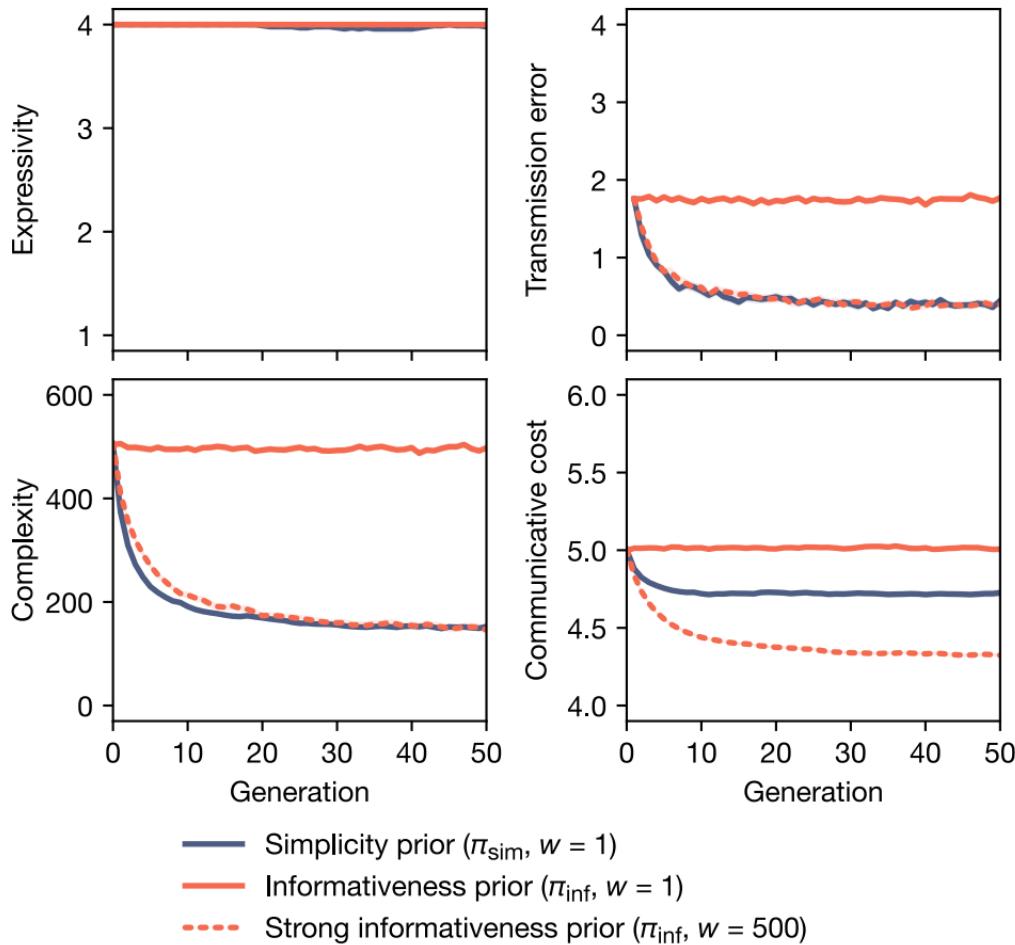
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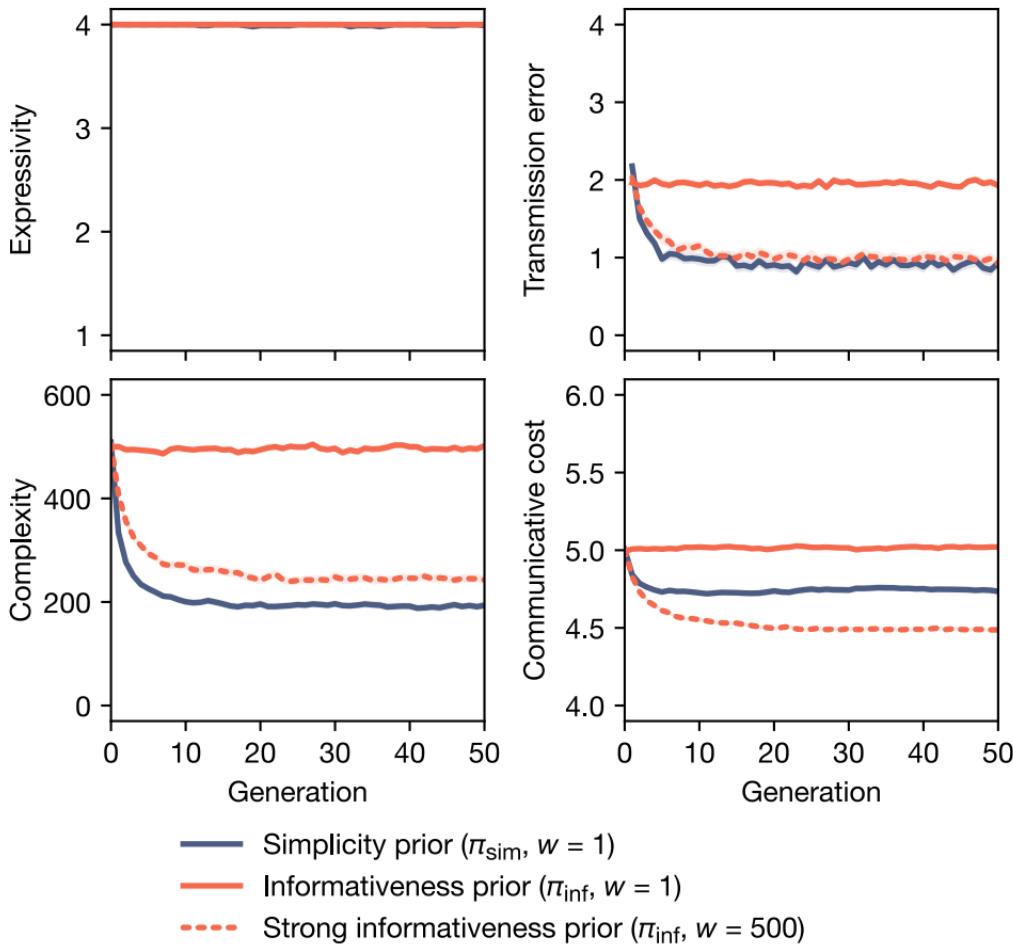
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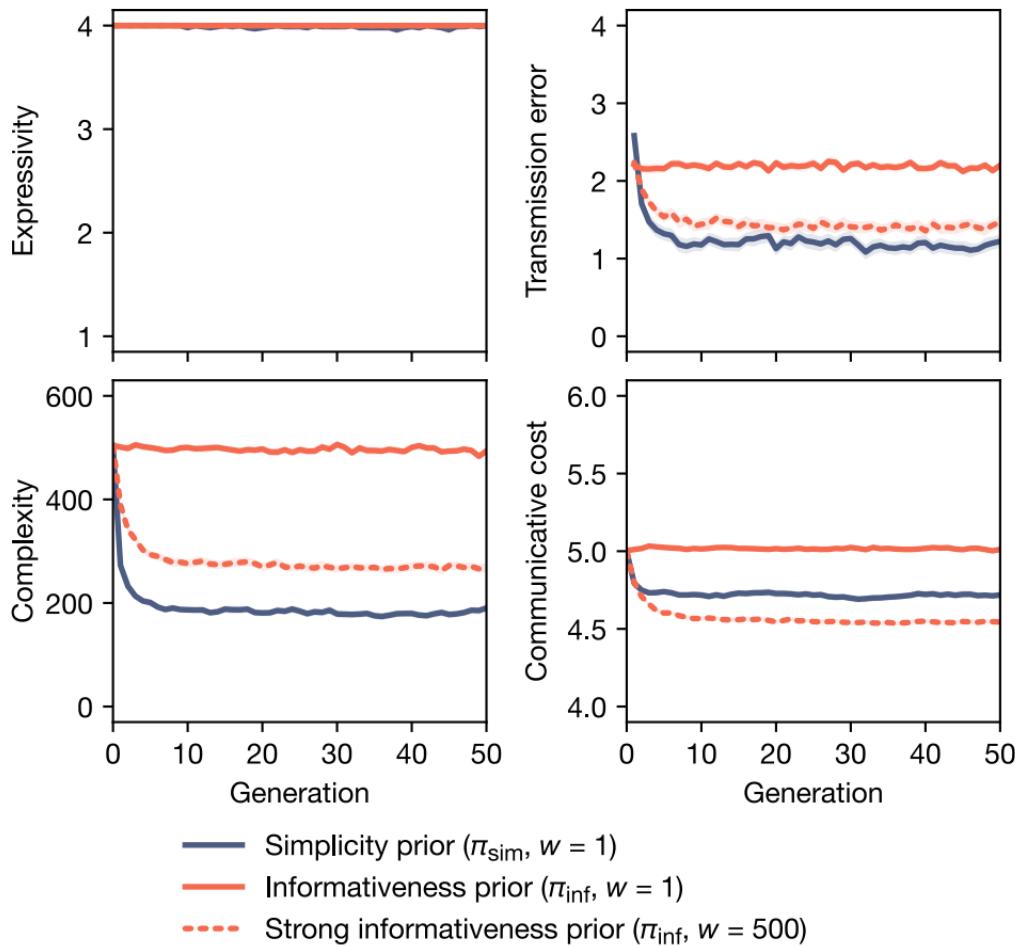
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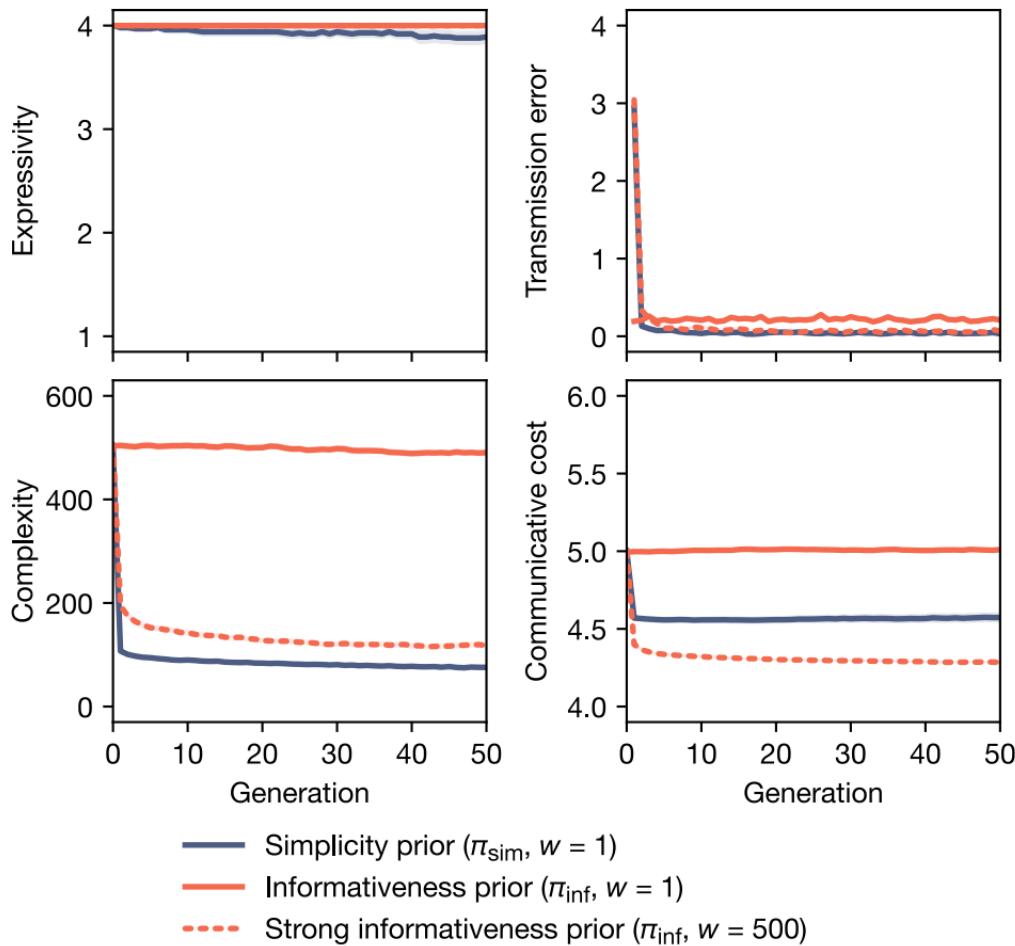
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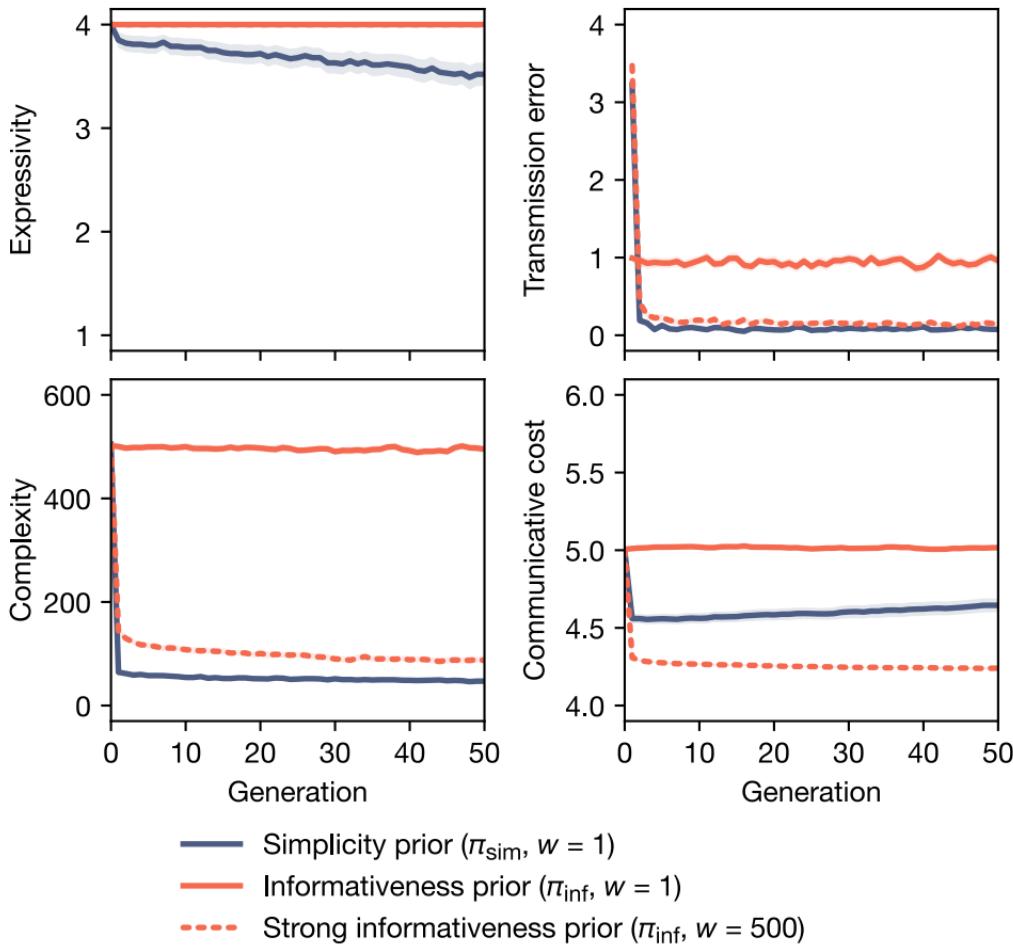
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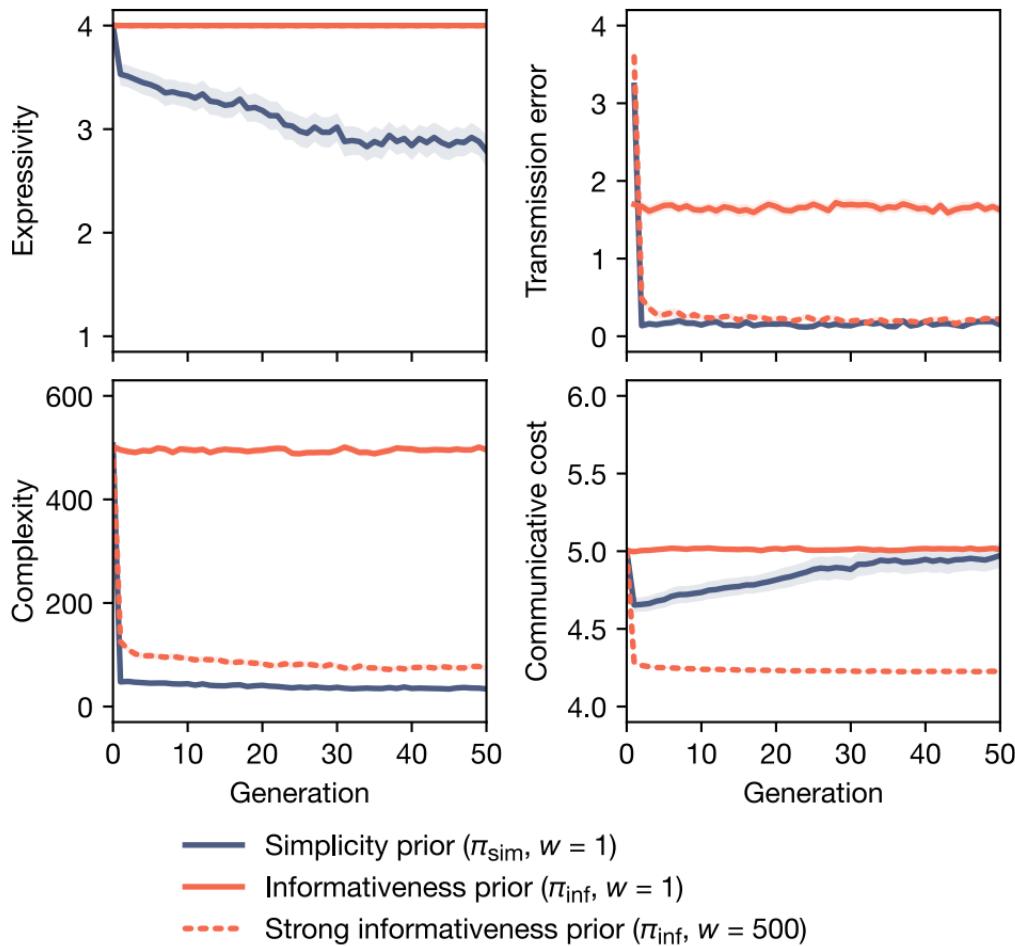
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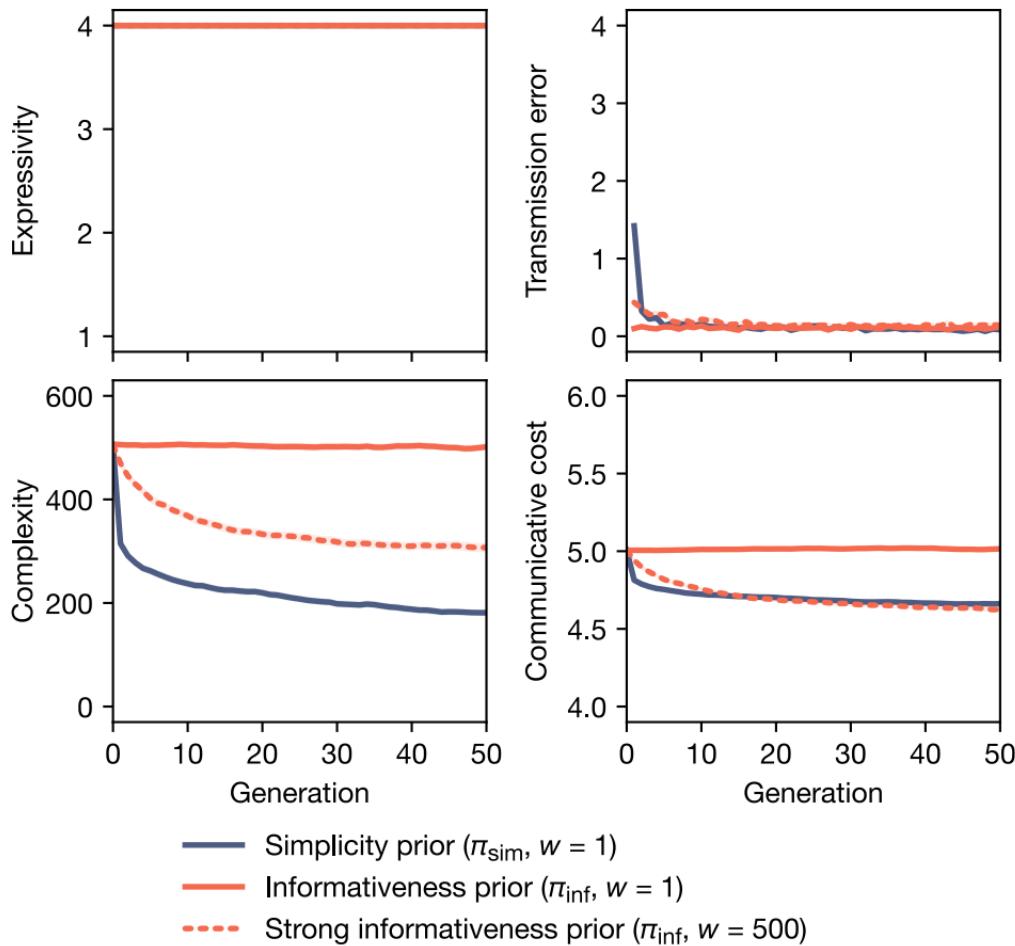
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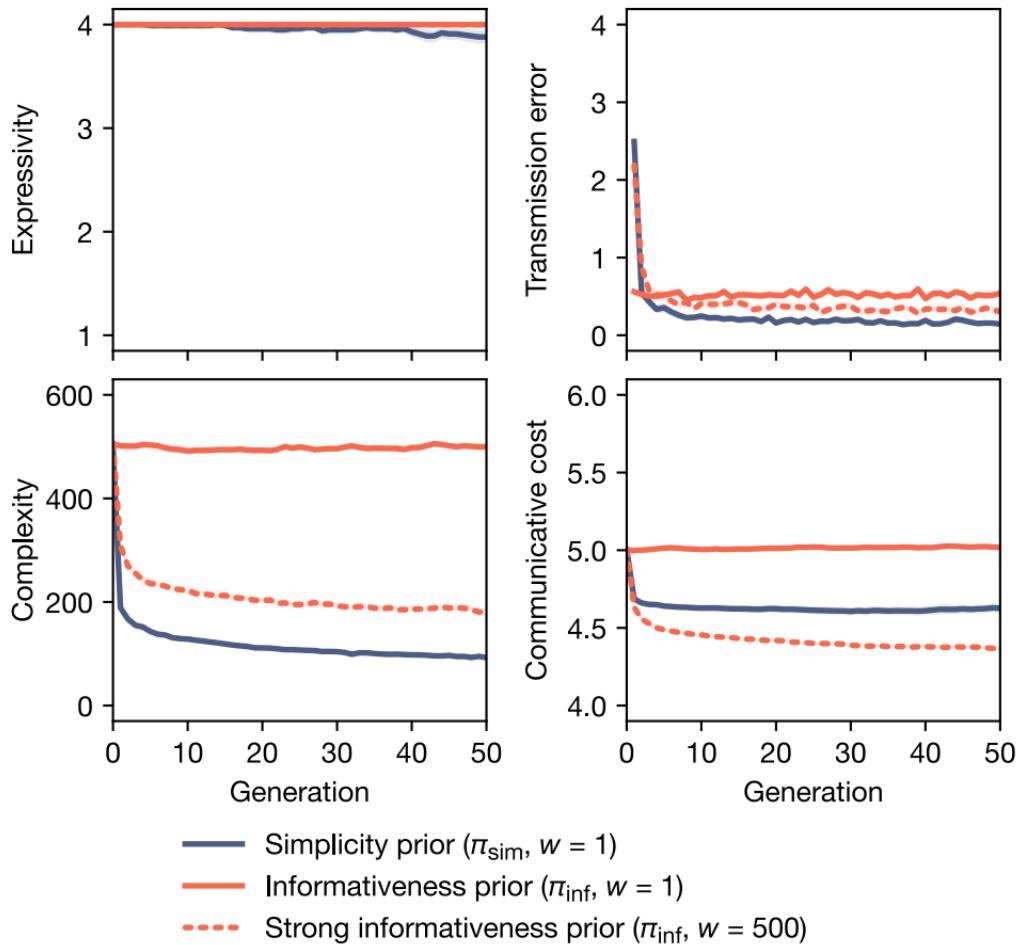
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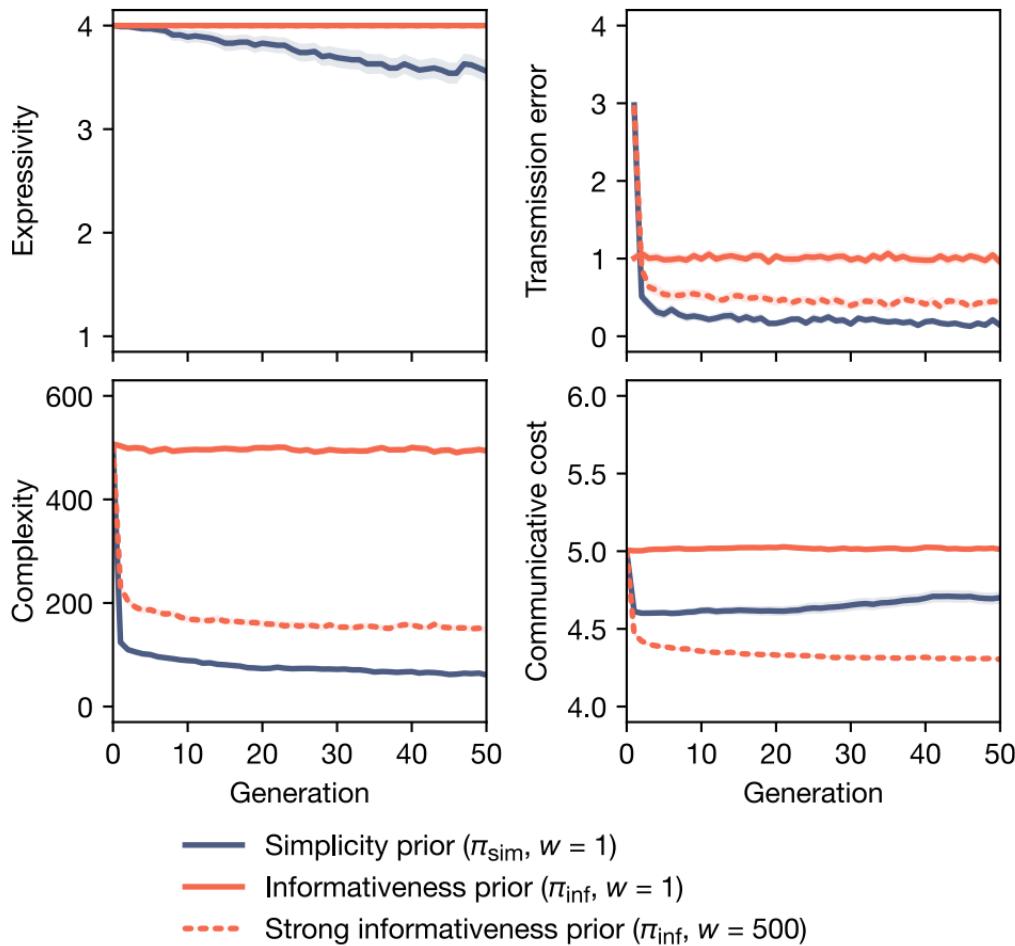
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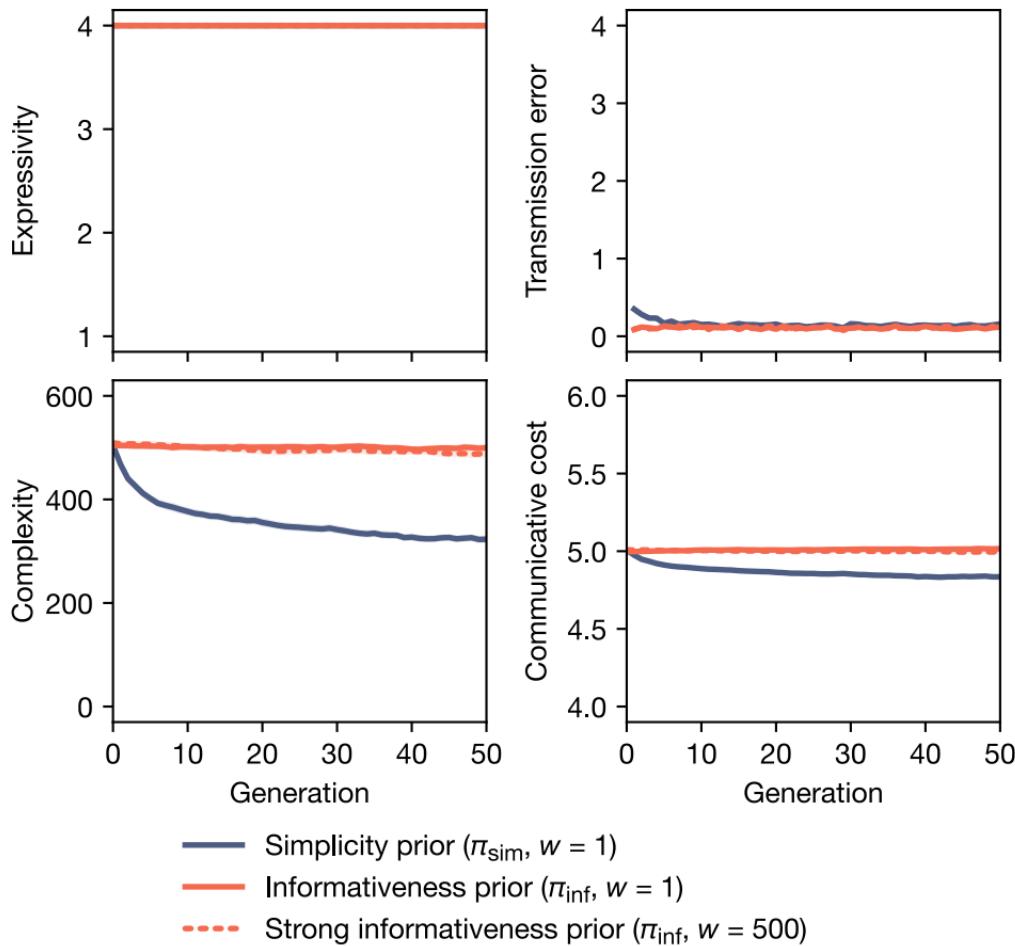
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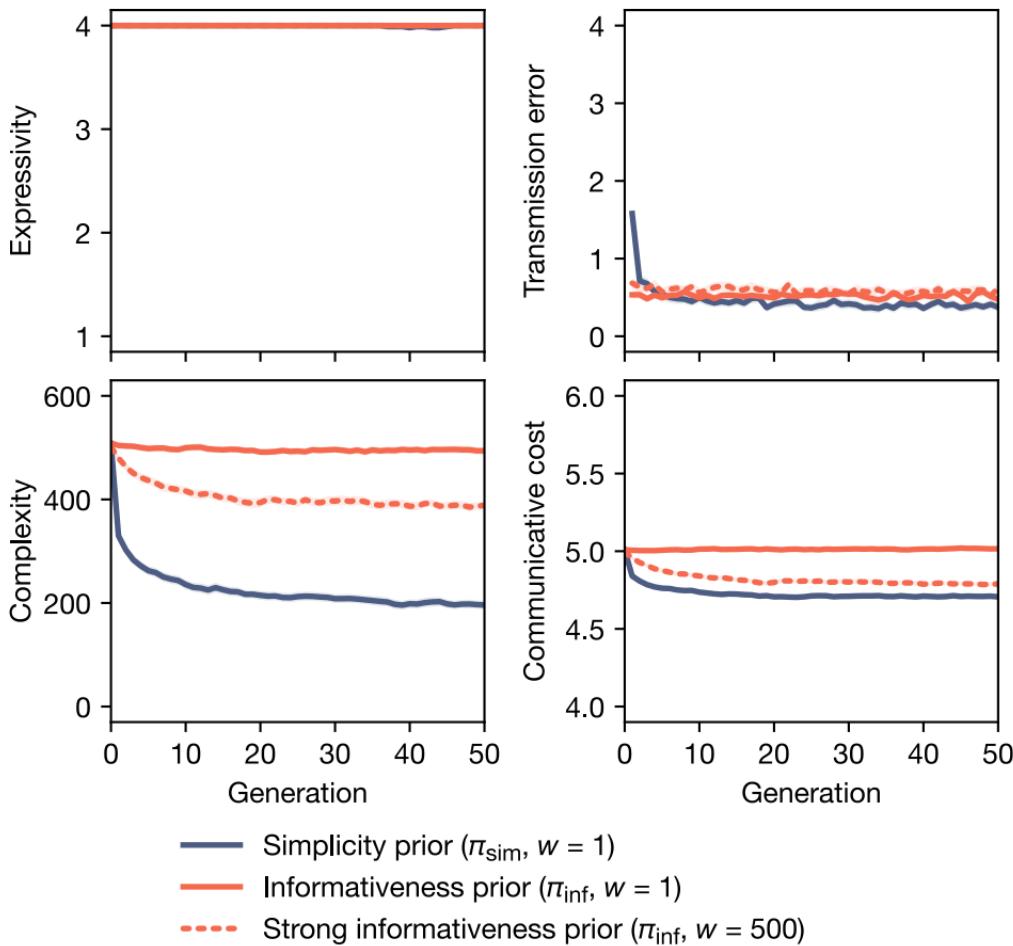
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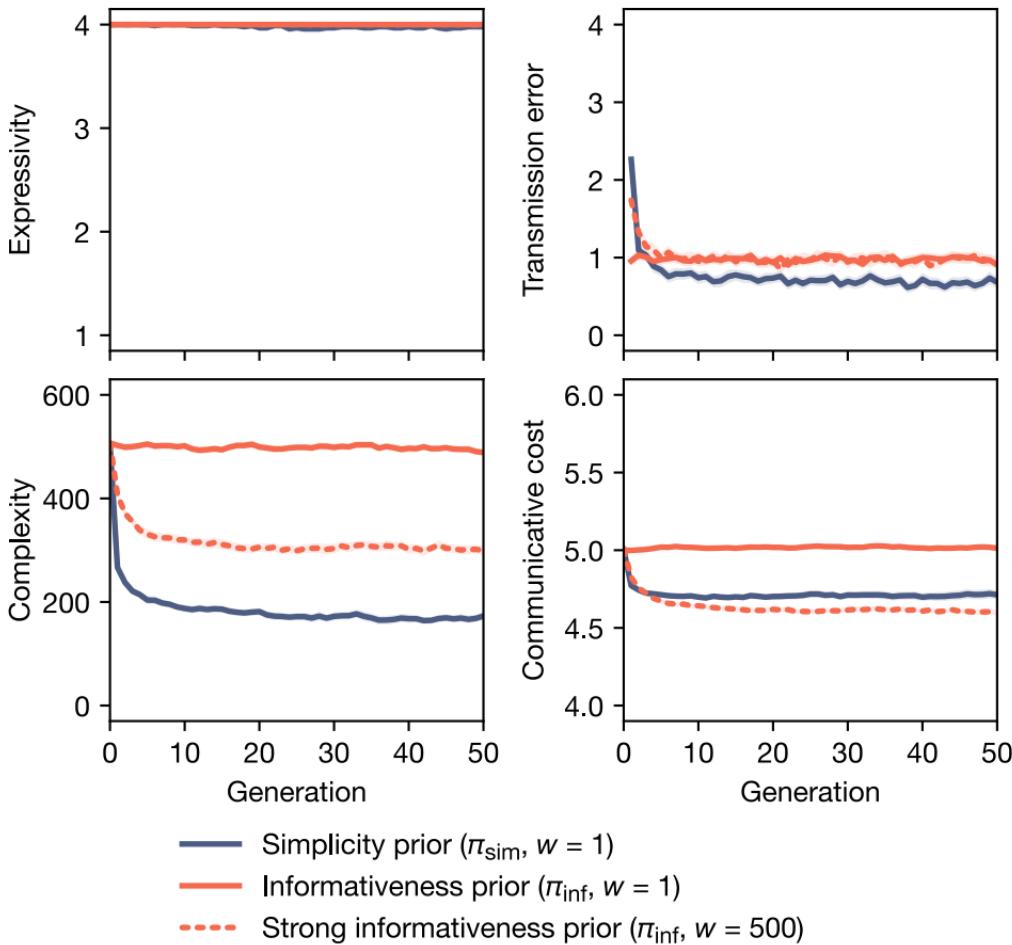
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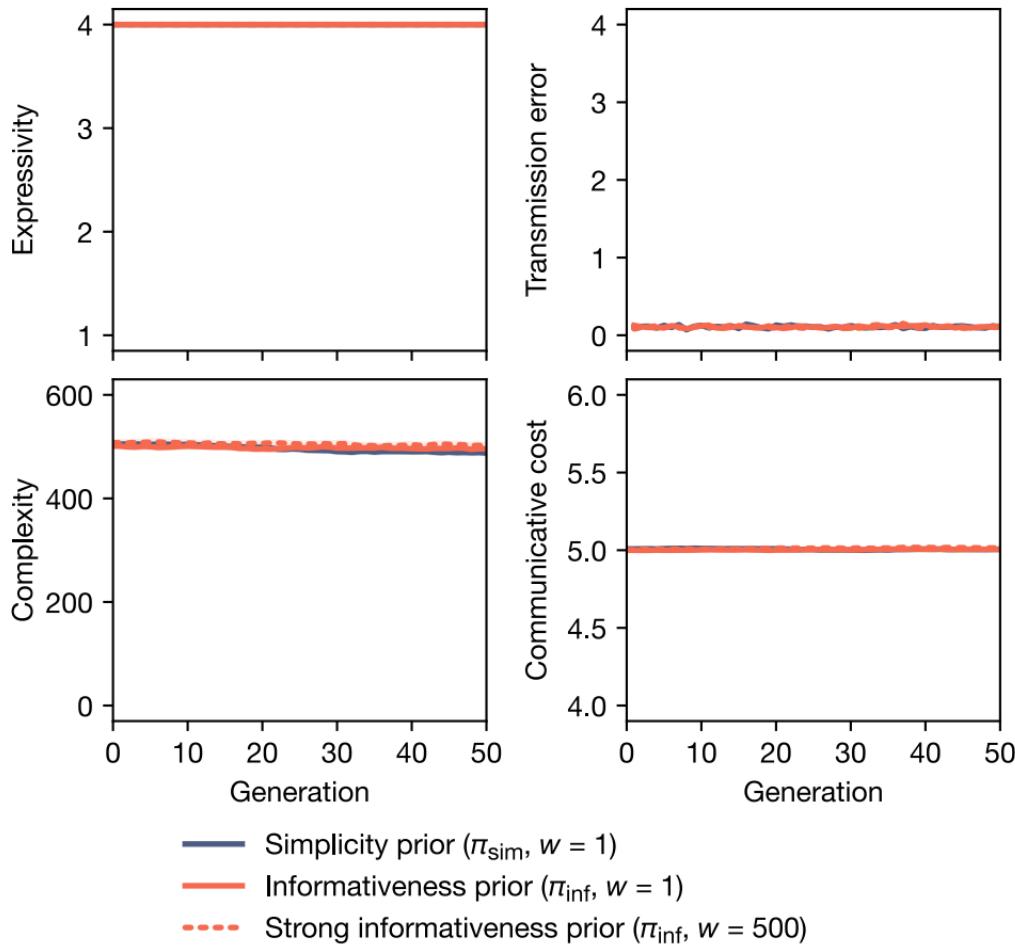
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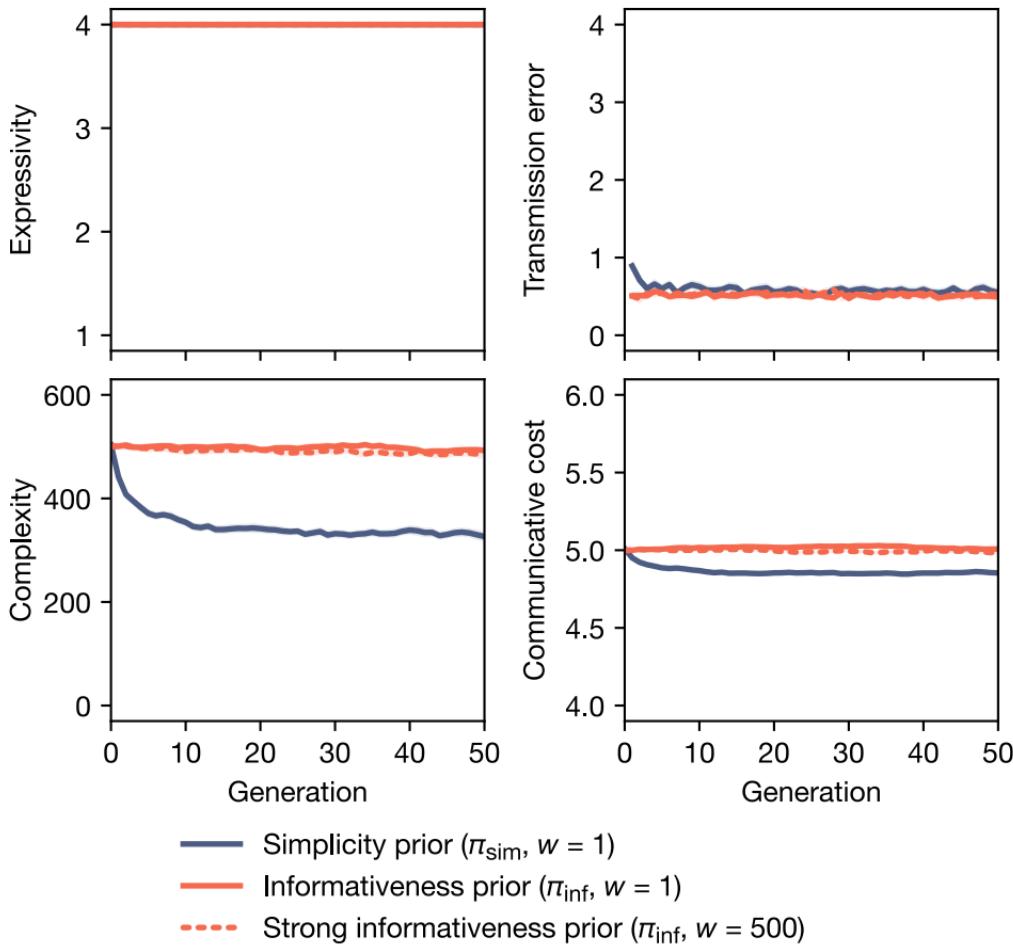
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$$b = 4, \xi = 4, \varepsilon = 0.01$$



$$b = 4, \xi = 4, \varepsilon = 0.05$$



$b = 4, \xi = 4, \varepsilon = 0.1$

