Better Off Than We Know: Distorted Perceptions of Incomes and Income Inequality in America

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Abstract

Three studies examined Americans' perceptions of incomes and income inequality using a variety of criterion measures. Contrary to recent findings indicating that Americans underestimate wealth inequality, we found that Americans not only overestimated the rise of income inequality over time, but also underestimated average incomes. Thus, economic conditions in America are more favorable than people seem to realize. Furthermore, ideological differences emerged in two of these studies, such that political liberals overestimated the rise of inequality more than political conservatives. Implications of these findings for public policy debates and ideological disagreements are discussed.

Keywords

In their widely publicized 2011 article in *Perspectives on Psychological Science*, Norton and Ariely surprised social scientists and laypersons alike with the claim that Americans on both sides of the political aisle tend to grossly underestimate wealth inequality in the United States. The data Norton and Ariely presented were indeed quite striking: When asked to guess the percentage of wealth owned by each quintile of the population from richest to poorest, participants misjudged by substantial margins the top (59% estimated vs. 84% actual) and bottom (4% estimated vs. 0.1% actual) of the distribution. Both errors favored equality, and overall participants moved wealth from the top quintile to the bottom three quintiles. Moreover, most participants, irrespective of their political affiliations, reported that they would be happier living in a country with even greater equality than indicated by their too-generous estimates. Thus, according to Norton and Ariely, the welter of highly visible disagreements between liberal and conservative policymakers concerning the optimal distribution of wealth may actually belie an underlying (and decidedly liberal) consensus among the American public.

Recent evidence suggests that Norton and Ariely's (2011) provocative findings may reflect a large degree of measurement error. Specifically, Eriksson and Simpson (2012) compared Norton and Ariely's method—asking study participants to grasp the abstract concept of aggregated net worth across households (i.e., the percentage of the country's overall wealth owned by each quintile)—with a method involving a logically equivalent but computationally simpler criterion—the average wealth of individual households within a given quintile. They found that the latter (average) method yielded dramatically higher estimates of wealth inequality than the former (percentage) approach. More important, by showing that this same measurement disparity also occurs in other domains with high levels of inequality (e.g., the number of visits to various Web pages), Eriksson and Simpson revealed a likely source of the difference: the well-documented anchoring-and-adjustment heuristic (see Chapman & Johnson, 2002), which causes people to estimate and (under)adjust an unknown quantity relative to an anchor point.[1]

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Despite these criticisms, Norton and Ariely's (2011) work generates many new and fundamental questions regarding Americans' perceptions of wealth inequality. Clearly, the method matters, and we suspected that further exploration would reveal additional complexity even beyond the discrepancies Eriksson and Simpson (2012) highlighted. In particular, Norton and Ariely's failure to document differences between political liberals and conservatives warrants careful reexamination.

We therefore designed a series of three studies, using a total of five different measurement strategies, with the broad goal of exploring the influence of political ideology on perceptions of economic inequality. Much research has shown that, relative to liberals, conservatives are more satisfied with the current social system, are more likely to prefer the principle of equity (outcomes should be proportional to contributions) over the principle of equality (outcomes should be equal regardless of contributions), believe more strongly that success is attainable through individual efforts, and have a more optimistic outlook on life (Haidt, 2012; Schlenker, Chambers, & Le, 2012; Taylor, Funk, & Craighill, 2006; Tetlock & Mitchell, 1993). This profile may dispose conservatives to view general economic conditions more favorably than liberals do when criterion measures are psychometrically sound (see Duch, Palmer, & Anderson, 2000, for some preliminary results). Thus, following in Norton and Ariely's (2011) exploratory footsteps, we aimed to document the pattern of differences, if any, between liberals and conservatives in perceptions of income inequality across a diverse set of measures.

Like Eriksson and Simpson (2012), we recruited participants for all three studies through Amazon.com's Mechanical Turk (MTurk) Web site. Studies have consistently shown that MTurk users better represent the U.S. population than do convenience samples of undergraduates (Paolacci, Chandler, & Ipeirotis, 2010) and produce high-quality survey data (Buhrmester, Kwang, & Gosling, 2011). For this investigation, we concerned ourselves narrowly with Americans' perceptions of incomes and income inequality, adopting the assumption that most Americans probably are more familiar with and therefore have an easier time conceptualizing relative incomes than net worth. Analyses of ideological differences simultaneously controlled for participants' age, gender, education level, and household income (for demographic information on the samples, see Table S1 in the Supplemental Material available online).

Study 1

Method

Following informed-consent procedures and completion of demographic items (including self-rated political ideology, from 1, *strongly liberal*, to 5, *strongly conservative*),

participants (N = 273) first estimated the percentage of all Americans whose annual incomes in 2010 fell into each of three income categories: under $35,000, $35,000 to $74,999, and $75,000 or over. To gauge participants' awareness of racial disparities in current economic conditions—another complexity not yet explored or addressed empirically—we also asked them to estimate the percentage of African Americans and European Americans in each category.

Next, adding an alternative measure of income-inequality perceptions, we asked participants to estimate how many times greater the incomes of Americans in the top 20% of the income distribution were compared with those in the bottom 20% in 1970, 1980, 1990, 2000, and 2010. To provide a baseline for these judgments, we informed participants that in 1967, this inequality margin was 11.13.[2]

Results

Current inequality. Figure 1 depicts the actual percentage of individuals in each income category (roughly analogous to the upper, middle, and lower income classes) for each target group alongside participants' estimates. The data show an overall bias toward underestimating American's average incomes. For example, participants on average believed that 48% of all Americans earn less than $35,000 per year (vs. 37% actual) and that only 23% of all Americans earn more than $75,000 per year (vs. 32% actual). The percentage of lower-income individuals was overestimated, one-sample ts(271) ≥ 7.04, p_{rep}s ≥ .99, and the percentage of middle-income and upper-income individuals was underestimated, one-sample ts(271) ≤ –2.68, p_{rep}s ≥ .96, for all three target groups (except in the case of middle-income European Americans, t < 1).[3]

Participants judged African Americans as having the lowest average incomes of the three target groups, indicating a general awareness of current racial disparities, but they nevertheless underestimated the incomes of even this relatively nonprivileged group. A 3 (target group) × 3 (income category) repeated measures analysis of variance (ANOVA) revealed a significant interaction of the quadratic effects, F(1, 271) = 119.20, p_{rep} > .99; income distributions were perceived to be bottom heavy (i.e., more people in the lower income categories than in the middle or upper categories) in general, and more so for African Americans than for European Americans. The interaction of income category and participant's ideology was significant, F(1, 254) = 6.66, p_{rep} = .95; politically liberal participants perceived income distributions to be more bottom heavy—and therefore were more inaccurate—compared with politically conservative participants.

Inequality over time. Figure 2 shows the actual and perceived inequality margins over the past five decades. Contrary to Norton and Ariely's (2011) findings on wealth
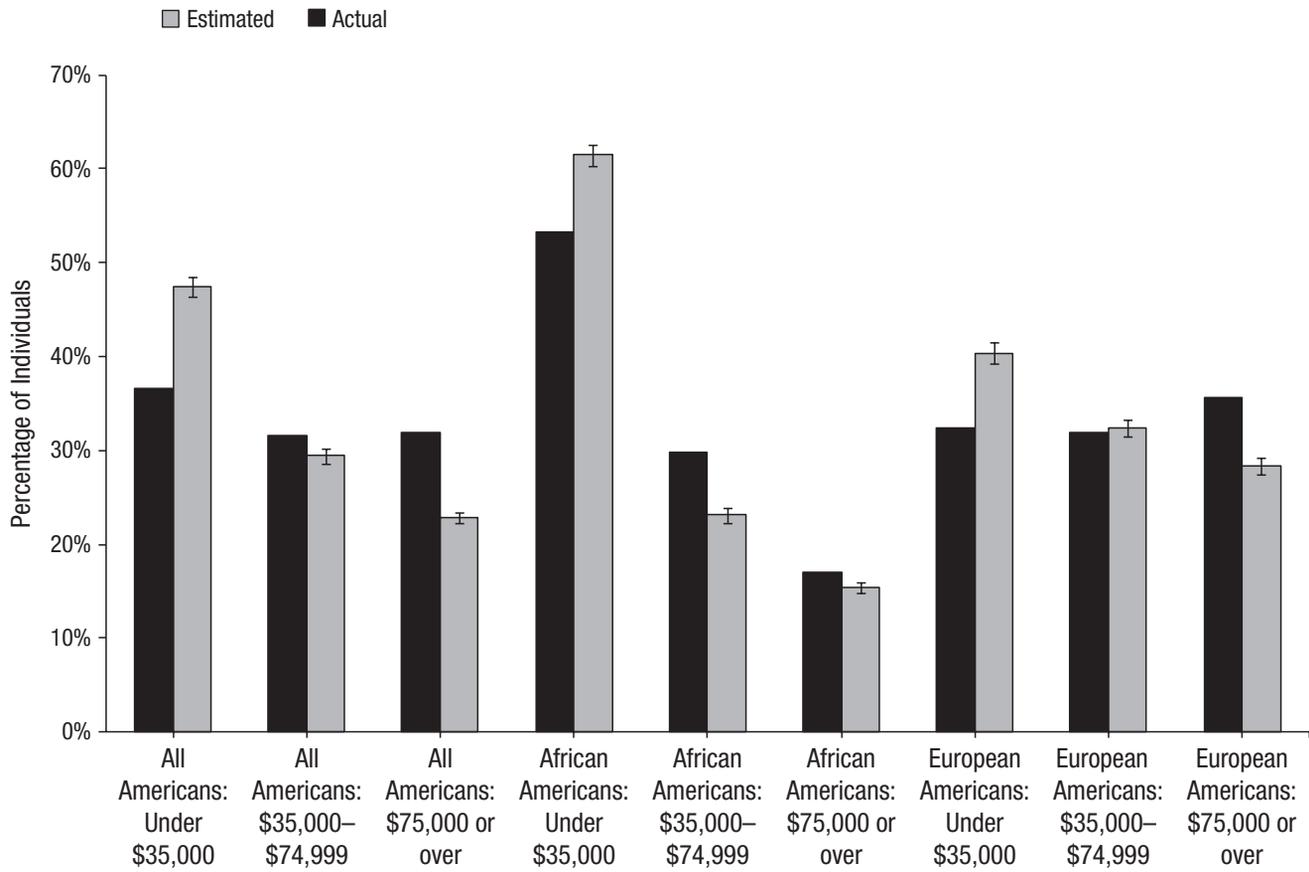
Fig. 1. Results from Study 1: estimated and actual percentage of all Americans, African Americans, and European Americans in three income categories. Error bars represent 95% confidence intervals.

inequality, the graph shows that participants greatly over-estimated the rise of income inequality. For example, participants estimated that in 1970, the top 20% of Americans had incomes about 12 times the incomes of the bottom 20%, and this estimate was only slightly higher than the actual inequality margin in that year (i.e., 10.88), one-sample $t(263) = 2.61$, $p_{rep} = .95$. However, participants estimated that the inequality margins had grown to 25 and 31 by 2000 and 2010, respectively, and these estimates were much higher than the actual inequality margins in those years (14.01 and 15.47, respectively), one-sample $ts(263) \geq 7.75$, $p_{rep}s \geq .99$. A significant quadratic effect of year on participants' inequality estimates confirmed this trend, $F(1, 263) = 13.18$, $p_{rep} = .99$. The interaction of year and ideology was significant, $F(1, 246) = 3.48$, $p_{rep} = .86$; compared with politically conservative participants, politically liberal participants estimated that inequality was growing at a much faster rate—and therefore had less accurate perceptions (for analysis of other demographic variables, see the Supplemental Material).

Study 2

Method

Participants in Study 2 ($N = 112$) estimated directly the average household incomes of Americans in both the top 20% and the bottom 20% of the income distribution in 1970, 1980, 1990, 2000, and 2010 (i.e., the same years included in Study 1). For context, participants were given the average non-inflation-adjusted income of the bottom 20% in 1967 ($1,398) prior to making their estimates.

Results

Figure 3 shows that participants again overestimated the growth of income inequality over time. Thus, Study 2 replicated results from Study 1, using a different measure. Specifically, the perceived income gap between the top and bottom 20% was much larger than the actual gap, and this overestimation increased over the decades; for example, the estimated gap was $161,578 in 1970 (vs.
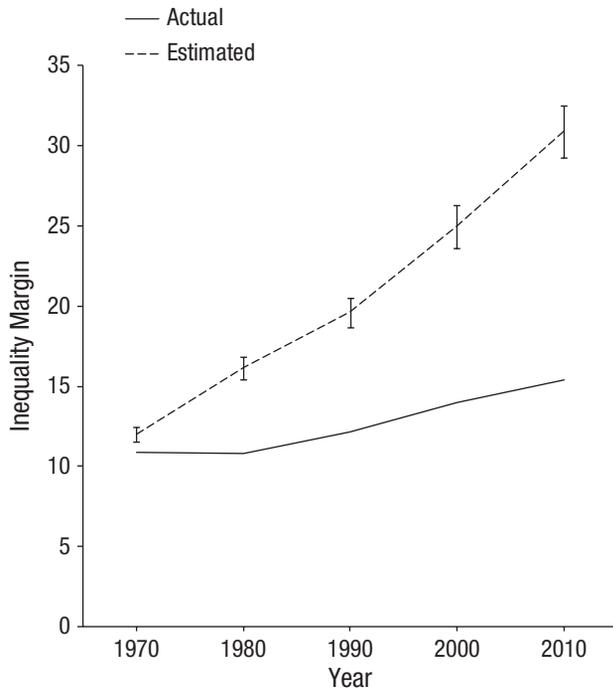
Fig. 2. Results from Study 1: estimated and actual income inequality (i.e., average income of Americans in the top 20% of the income distribution divided by average income of Americans in the bottom 20%) over recent decades. Error bars represent 95% confidence intervals.
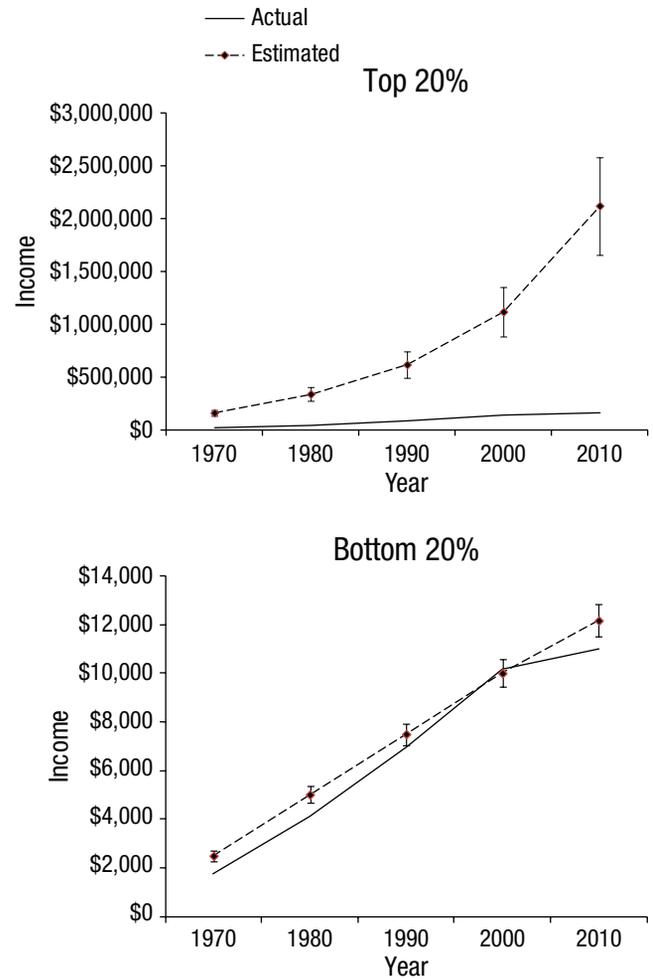

Fig. 3. Results from Study 2: estimated and actual household incomes of the top quintile (top panel) and bottom quintile (bottom panel) of Americans over recent decades. Error bars represent 95% confidence intervals.

$17,557 actual), $613,462 in 1990 (vs. $77,516 actual), and $2,111,779 in 2010 (vs. $158,599 actual), all ts(111) ≥ 4.23, p_{rep}s ≥ .99.

Moreover, this overestimation was clearly due to inflated perceptions of upper-income individuals' household earnings. Estimates of incomes in the bottom 20% were fairly accurate, never deviating from actual incomes by more than $1,200 in any of the years (though slightly overestimating them in 1970, 1980, and 2010), one-sample ts(111) ≥ 1.77, p_{rep}s ≥ .84 (see the bottom panel of Fig. 3). Conversely, the incomes of the top 20% were severely overestimated, one-sample ts(111) ≥ 4.20, p_{rep}s ≥ .99 (see the top panel of Fig. 3)—by no less than $144,000 in any year, and by a full $1,955,000 in 2010. This pattern was confirmed by a significant (linear) Income Category × (cubic) Year interaction in a repeated measures ANOVA, F(1, 111) = 7.39, p_{rep} = .96. Moreover, a significant three-way interaction with political ideology, F(1, 106) = 6.52, p_{rep} = .95, revealed that politically liberal participants exaggerated the rise of inequality over time more than did conservatives, a result that replicated the ideological differences observed in Study 1 (see the Supplemental Material for additional analyses).

Study 3

Method

Study 3 (N = 145) presented participants with two forced-choice questions. The first question, concerning high-income earners, presented the cutoff point for the top 20% of the income distribution in 2010 ($100,065) and asked participants whether the cutoff for the top 1% was either $380,354 (the actual cutoff) or $681,649 (an erroneously high cutoff). The second question, concerning low-income earners, presented the cutoff point for the bottom 20% ($20,001) and asked participants whether the cutoff for the bottom 1% was either $3,517 (the actual cutoff) or $11,904 (an erroneously high cutoff).

Additionally, Study 3 built on Study 2 by focusing on the end of the income distribution that is apparently perceived with the most distortion, asking participants to estimate the percentage of American households in each of three high-income categories: one moderately high ($75,000 to $999,999) and two extremely high ($1,000,000 to $4,999,999 and $5,000,000 or above). Finally, Study 3 revisited the issue of racial disparities by asking participants to estimate separately the average household incomes of all Americans, African Americans, and European Americans.

Results

Most participants (76%) incorrectly selected the higher value ($681,649) as the cutoff for the top 1% of earners, magnifying the level of income it takes to qualify as a "1 percenter." For the bottom 1%, most participants (63%) correctly selected the lower cutoff. In addition, participants underestimated the percentage of Americans in the moderately high income category (*M* estimate = 17.01% vs. 28% actual), one-sample $t(138) = -10.91$, $p_{rep} = .99$, a conceptual replication of the pattern observed in Study 1, but they overestimated the percentage of Americans in both of the extremely high income categories (*M* estimate = 4.44% vs. < 0.5% actual; *M* estimate = 1.88% vs. < 0.5% actual), one-sample $ts(138) \geq 7.97$, $p_{rep}s \geq .99$. Finally, also as in Study 1, participants underestimated the average incomes of all Americans, African Americans, and European Americans (see Fig. 4), one-sample $ts(144) \leq -11.41$, $p_{rep}s \geq .99$, even as they correctly recognized disparities in these three groups' incomes. No significant effects of political ideology emerged in any of these analyses ($p_{rep}s \leq .85$; see the Supplemental Material for additional analyses).

General Discussion

Inspired by Norton and Ariely's (2011) groundbreaking study of Americans' perceptions of economic inequality, we designed these studies to resolve some of the controversy and confusion surrounding those initial
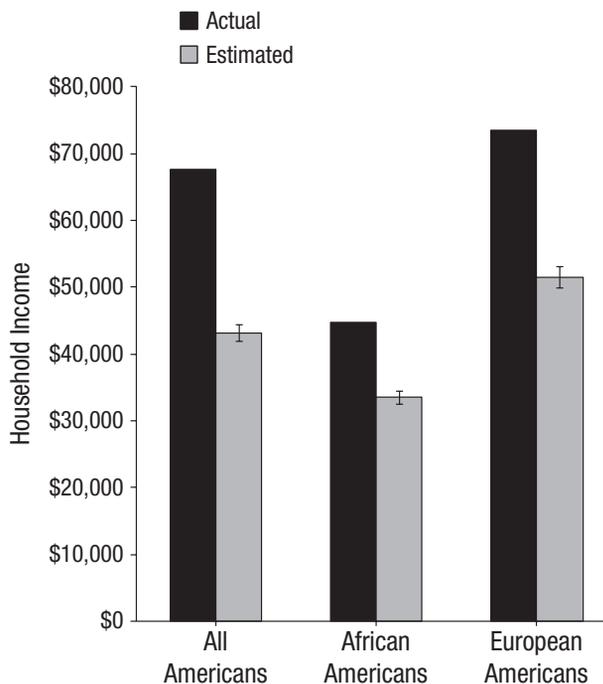

Fig. 4. Results from Study 3: estimated and actual household incomes of all Americans, African Americans, and European Americans. Error bars represent 95% confidence intervals.

findings. Our data, based on a diverse array of criterion measures, paint an altogether different picture: On the whole, Americans appear to be better off than they know (see also Cox & Alm, 1999). Study 1 revealed that participants consistently overestimated the size of the income gap and its growth over time. Study 2 provided a conceptual replication of this general overestimation effect and showed that most of the distortion occurs because participants exaggerate the incomes of top earners. We further confirmed this asymmetry in Study 3, finding that most participants overestimated both the cutoff point for the top 1% of income and the percentage of Americans in extremely high income categories. Studies 1 and 3 also found that the exaggeration of income inequality coexists with a tendency to underestimate American's (average) incomes. Perhaps the popular media's widespread reporting of high unemployment rates, the stagnant economy, and the genuine rise in wealth inequality has contributed to these pessimistic misperceptions.

In light of the measurement confounds in Norton and Ariely's (2011) study (Eriksson & Simpson, 2012), which found that participants of all political persuasions underestimated wealth inequality, we suspected that differences between conservatives and liberals would surface in our data. Indeed, when ideological differences emerged, they indicated that liberals perceived economic conditions more pessimistically (and less accurately) than conservatives, though both groups were too pessimistic in general (see Figs. S1–S3 in the Supplemental Material). Our findings are consistent with other research indicating that liberals view the current social system more negatively (Schlenker et al., 2012) and general economic conditions more pessimistically (Duch et al., 2000) than conservatives. Thus, contrary to the idea that conservatives engage in motivated reasoning processes that should lead them to perceive inequality less accurately (see Napier & Jost, 2008), conservatives' perceptions were at least as accurate as liberals' perceptions, and more accurate in some cases.

Given that Americans' voting behaviors are shaped by their perceptions of economic conditions (Jacoby, 2010), the present findings have important implications for current debates over public policy. Conservatives generally oppose, and liberals generally favor, progressive taxation policies and other programs designed to redistribute wealth. Undoubtedly, some of this conflict stems from differences in core ideological principles (e.g., concerning the role of government intervention and regulation of free markets), yet the present research suggests an additional reason: Conservatives and liberals are in many cases literally perceiving different economic conditions. Liberals, perhaps because of their relative dissatisfaction with the current system, view economic conditions more pessimistically, which may drive them to support policies aimed at redistributing wealth and narrowing the wealth

gap. Conservatives, perhaps because of their relative satisfaction with the current system, view conditions more optimistically, which may drive their opposition to such policies. Thus, as appealing as Norton and Ariely's (2011) claim of implicit bipartisan consensus may appear, our data suggest a more complicated perceptual state of affairs worthy of increased attention from psychological scientists.

Author Contributions

J. R. Chambers conceived of the study idea, designed the individual studies, and collected and analyzed the data. All authors (J. R. Chambers, L. K. Swan, and M. Heesacker) contributed to drafting and revising the manuscript. All authors approved the final version of the manuscript for submission.

Declaration of Conflicting Interests

The authors declared that they had no conflicts of interest with respect to their authorship or the publication of this article.

Supplemental Material

Additional supporting information may be found at http://pss .sagepub.com/content/by/supplemental-data

Notes

1. In the case of Norton and Ariely's study, the anchor was 20%, which would represent five completely equal groups (Eriksson & Simpson, 2012).
2. Inequality margins were calculated by dividing the average household income of the top income quintile by the average household income of the bottom income quintile (average incomes were based on U.S. Census Bureau data; see Table A-3 in DeNavas-Walt, Proctor, & Smith, 2011). For example, in 2010, the average household income of the top quintile was 15.37 times that of the bottom quintile ($169,633/$11,034 = 15.37).
3. Degrees of freedom vary for some of the subsequently reported tests because of missing data. Measures in all three studies were Winsorized (using a 5th/95th percentile criterion) to adjust for the presence of outliers (see Ruppert, 2006).

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