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A Response to Do higher-class individuals feel more entitled? The role of system -justifying belief (Xu et al., 2019)

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A few months ago, *The Journal of Social Psychology* published the article *Do higher-class individuals feel more entitled? The role of system -justifying belief* (Xu, Yang, Li, Li, & Guo, 2019). In this paper, the authors presented two studies to show the role of system justifying beliefs in the association between social class and entitlement. Overall, the argument proposed that higher class individuals would feel more entitled when perceiving social hierarchies as fair and legitimate. According to the authors, both studies provided evidence – correlational and experimental – supporting this theoretical argument.

From a methodological perspective, nevertheless, this article has an important caveat in Study 2 that directly contradicts the conclusions stated by the authors. Undergraduates were asked to participate in a study with the following structure: manipulation of social class, manipulation of system justifying beliefs, demographic questions, and the main dependent variable (i.e., entitlement). The authors adapted the manipulation of social status developed by Piff et al. (2010) by randomly assigning participants to a high-SES and low-SES conditions.

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However, according to the manipulation checks, properly reported by the authors in the article, the manipulation task failed to modify participants' perceptions of social class. An ANCOVA, controlling for objective social class (i.e., parents' occupation) showed nonsignificant differences between conditions in subjective social class. For this reason, the authors repeated the analysis excluding participants at the top and bottom of the scale of subjective social status, finding that among the remaining participants, the manipulation of social status had the intended results.

A deeper inspection of the data, made publicly available by the authors, provides some insights regarding the manipulation. First, an ANOVA showed that there were no differences in subjective social class by condition, $F(1, 126) = 3.64, p = .059, \eta^2 = .03$. Second, a main effect of condition did emerge when controlling for objective social status, $F(1, 124) = 3.98, p = .048, \eta^2 = .03$. Interestingly, the main effect of objective social class was highly significant, $F(1, 124) = 12.62, p < .001, \eta^2 = .09$, but the interaction term was not significant, $F(1, 124) = 1.37, p = .243, \eta^2 = .01$. These results raise concerns regarding the randomization of participants between conditions because objective social class was measured through parents' occupation, which means that it should not be affected by the manipulation of subjective social class. In other words, it is likely that participants were not comparable between conditions in terms of objective social class. Indeed, an ANOVA showed that objective social class was different by condition, $F(1, 126) = 5.82, p = .017, \eta^2 = .04$, with participants in the high-SES condition reporting higher objective social class ($M = 3.70, SD = 2.12$) than those in the low-SES condition ($M = 2.86, SD = 1.79$).

Additional analyses confirm the suspicion that randomization failed in Study 2. The manipulation of system justifying beliefs was included after the manipulation of social class (as well as its manipulation check). Therefore, subjective social class should not be affected by

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system justifying beliefs. Nevertheless, this variable showed differences between conditions, $F(1, 126) = 7.07, p = .009, \eta^2 = .05$, with participants in the high-system justifying beliefs condition scoring higher in subjective social class ($M = 5.32, SD = 1.21$) than those in the low-system justifying beliefs condition ($M = 4.76, SD = 1.17$). More importantly, when submitting these scores to a two-way ANOVA with both manipulations as independent variables, only the main effect of system justifying beliefs manipulation was significant, $F(1, 124) = 7.16, p = .008, \eta^2 = .05$. Neither social class manipulation, $F(1, 124) = 5.32, p = .054, \eta^2 = .03$, nor the interaction term reached conventional levels of significance, $F(1, 124) = .00, p = .991, \eta^2 = .00$.

These analyses suggest that even if the authors manipulated subjective social class, the data cannot be treated as experimental. A more appropriate approach is to treat the data as correlational, which means using the continuous score of subjective social class as the independent variable instead of condition. Therefore, I conducted a linear regression model with entitlement as the dependent variable and objective social class, subjective social class, system justifying beliefs condition, and the interaction term between these two last variables as the predictors. The results showed that the model was not significant, $F(4, 123) = 2.39, p = .055, R^2 = .07$, with subjective social status, $b = 1.22, s.e. = .72, t = 1.69, p = .093$, objective social status, $b = .27, s.e. = .30, t = .87, p = .385$, and system justifying beliefs condition, $b = -.77, s.e. = 1.17, t = -.66, p = .509$ as nonsignificant predictors. More importantly for the hypotheses tested by Xu et al. (2019), the interaction term between subjective social class and system justifying beliefs condition was not significant, $b = .12, s.e. = .96, t = .12, p = .901$.

In summary, contrary to the conclusions by Xu et al. (2019), Study 2 does not provide reliable evidence that the association between social class and entitlement is dependent on the perception of fairness and legitimacy of the social systems. This does not invalidate the

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theoretical argument by itself, but it means that further research is necessary to properly contrast the hypotheses proposed by these authors.

References

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- Xu, B. X., Yang, S. L., Li, J., Li, Y., & Guo, Y. Y. (2019). Do higher-class individuals feel more entitled? The role of system-justifying beliefs. *The Journal of Social Psychology*. doi:10.1080/00224545.2019.1671783

Appendix

Script for R

```
####Letter to editor (The Journal of Social Psychology)###
library(Hmisc)
library(psych)
library(car)
library(interactions)
mydata<-spss.get("C:\\ Study Two.sav",use.value.labels=FALSE)
####Step 1: Comparing subjective status by condition###
describeBy(mydata$ssc,list(mydata$scm),digits=2)
mydata$scm <- as.factor(mydata$scm)
leveneTest(ssc~scm,data=mydata)
anova1 <- aov(ssc~scm,data=mydata)
summary(anova1)
eta1<-5.32/(5.32+184.40)
eta1
####Step 2: Comparing subjective social status by condition
####controlling for objective social status (as in Xu et al., 2019)
anova2 <- aov(ssc~scm*osc,data=mydata)
summary(anova2)
etascm<-5.32/(5.32+165.70)
etascm
etaosc<-16.86/(16.86+165.70)
etaosc
etaint<-1.84/(1.84+165.70)
```

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etaint
####Step 3: Comparing objective social class by condition
anova3 <- aov(osc~scm,data=mydata)
summary(anova3)
etaosc<-22.4/(22.4+485)
etaosc
describeBy(mydata$osc,list(mydata$scm),digits=2)
####Step 4: Comparing subjective social class by two manipulations
describeBy(mydata$ssc,list(mydata$sjbm),digits=2)
anova4 <- aov(ssc~sjbm,data=mydata)
summary(anova4)
eta4<-10.07/(10.07+179.64)
eta4
anova5 <- aov(ssc~scm*sjbm,data=mydata)
summary(anova5)
etasjbm<-10.07/(10.07+174.33)
etasjbm
etascm2<-5.32/(5.32+174.33)
etascm2
etaint2<-0.00/(0.00+174.33)
etaint2
####Step 5: Using data as correlational
mydata$sscc<-mydata$ssc-mean(mydata$ssc)
mydata$oscc<-mydata$osc-mean(mydata$osc)
model1<-lm(PE~sscc*sjbm+oscc,data=mydata)
summary(model1)
####Additional analyses: replicating results by Xu et al. (2019)
mydata$scm <- as.numeric(mydata$scm)
model2<-lm(PE~scm*sjbm+oscc,data=mydata)
summary(model2)
sim_slopes(model2,pred=scm,modx=sjbm)

```