Supporting Information

Danziger et al. 10.1073/pnas.1018033108

SI Materials and Methods

S1. Number of Cases Viewed by the Judge. The total number of cases the judge viewed in a day was greater than what we report in the main text ($M = 27.86$, SD = 4.43). The reason for the discrepancy is that some cases are brought before the judge after the state prosecutor and defense attorney had already come to a resolution regarding the prisoner's request and were simply presenting the agreement to the judge for final approval. In our sample, the judge approved every agreement. This situation is almost universally the case also outside our sample. Thus, we omit these cases because they do not represent actual decisions by the judge about which party to favor and, hence, cannot be used in our empirical test.

S2. Survey of Attorneys. To ascertain whether the criminal defense attorneys who represent the prison population in our study were aware of a possible effect of order on judicial decisions, we distributed a survey among 23 lawyers of varying levels of experience ($M = 9.8$ y experience, SD = 8.3). They were asked to indicate the factors they thought influence a decision by a judge to grant/deny parole. The four most frequently mentioned factors were having a rehabilitation program in place ($n = 22$, 95.6%), the number of previous incarcerations ($n = 17$, 73.9%), severity of the offense ($n = 13$, 56.5%), and prisoner behavior during the incarceration ($n = 10$, 43.4%). No other factor was mentioned by more than 6 lawyers (26%). None of the lawyers mentioned ordinal position.

Next, on a 1–7 scale ranging from 'not at all' (1) to 'to a large degree' (7), the lawyers were asked to rate the extent to which severity of offense, prisoner ethnicity, prisoner sex, months incarcerated, number of previous incarcerations, having a rehabilitation program in place, the ordinal position of the case in the case sequence, prisoner age, prisoner health, sex of the judge, and the marital status of the prisoner influences the decision of the judge to grant/deny parole. Number of previous incarcerations ($M = 6.13$, SD = 0.91), having an approved rehabilitation program ($M = 6.0$, SD = 1.17), severity of offense ($M = 5.65$, SD = 1.33), and months in prison ($M = 5.21$, SD = 1.34) were rated as the most influential factors. The least influential factors were ordinal case position ($M = 2.78$, SD = 1.44) and prisoner ethnicity ($M = 2.65$, SD = 1.36). The importance score for ordinal case position was significantly lower (all P values <0.0001) than that of each of the four most influential factors.

In summary, using two different measures, we do not find evidence to suggest that a sample of the lawyers present at the parole hearings are aware of the strong effect that ordinal case position can have on rulings.

S3. Survey of Parole Board Members. In addition to surveying the lawyers, we also investigated whether members of the parole board were aware of the effect of order. Sixteen parole board members were asked to rate the extent to which severity of offense, prisoner ethnicity, prisoner sex, months incarcerated, number of previous incarcerations, having a rehabilitation program in place, the ordinal position of the case in the case sequence, prisoner age, prisoner health, the quality of the lawyer, the mood of the judge, prison location, the season in the year and the marital status of the prisoner influences the decision of the judges to grant/deny parole. Fourteeen members completed this part of the survey. Having an approved rehabilitation program ($M = 6.50$, SD = 0.65), number of previous incarcerations ($M = 5.85$, SD = 0.86), severity of offense ($M = 5.14$, SD = 1.23), and months in prison ($M = 4.07$, SD = 1.49) were rated as the most influential factors. The least influential factors were the prison location ($M = 1.53$, SD = 1.66), prisoner ethnicity ($M = 1.57$, SD = 0.93), the season in the year ($M = 2.00$, SD = 1.68), ordinal case position ($M = 2.00$, SD = 1.10), the mood of the judge ($M = 2.07$, SD = 1.03) and prisoner sex ($M = 2.28$, SD = 1.48). The importance score for ordinal case position was significantly lower (all P values <0.001) than that of each of the four most influential factors. Furthermore, the importance score of ordinal position did not differ from any of the unimportant factors (all P values >0.27).

Next, we presented the 16 parole board members with three written descriptions of possible relations between the decision of the judge to grant/deny parole and ordinal case position. We asked them to select the one that they believed best represented the judge's decisions as a function of ordinal case position. The first description was one in which there is no relation between the order of cases and the judge's decision to grant/deny parole. The second description was one in which the probability of release increased from the first case to the last case in each of the three decision sessions in the day. The third description was one that matched the pattern we find in our data. None of the parole board members indicated that the third description fit the decision pattern of the judges. Fifteen of 16 indicated that there was no relation between ordinal case position and decisions, and one member indicated that the second description fit the decision pattern of the judges.

In summary, using two different measures, we do not find evidence to suggest that a sample of the parole board members are aware of the strong effect that ordinal case position can have on rulings. Although this lack of awareness might seem surprising at first blush, it is worth noting that, even though the drop in prisoner releases is dramatic, in most cases it is not quite as dramatic as presented in Fig. 1. For instance, if one were to examine only 80% of the cases before the judge in each decision session, the drop in probability of release is around 45% rather than 65%, as is evident when one plots 95% of the cases (i.e., Fig. 1). This drop is precipitous, but perhaps the fact that in most cases the probability does not drop to zero reduces the likelihood that the judges will perceive the presence of an order effect.

S4. Correlations Between Ordinal Position Indicators and Variables Reflecting Case Severity. We tested whether order of cases was random by calculating the correlation between various indicators of ordinal position in a decision session and variables that reflect the severity of the prisoners' crimes (severity of crime, months in prison) as well as his or her history of recidivism (previous incarcerations). The ordinal position measures that we used in our analysis were as follows: (*i*) a simple counter that increased for each decision in the session; (*ii*) a counter that corresponded to the overall number of cases brought before the judge within the session, including those that had been agreed upon between the prosecution and defense (*SI Materials and Methods, S1*); (*iii*) the cumulative number of minutes spent deliberating within the session up to that case; (*iv*) a counter that corresponded to the overall number of decisions made in the day; and (*v*) an indicator of which of the daily sessions the case appeared in. Table S16 presents the 20 correlations that we calculated; in the vast majority of cases, they are not statistically significant. There was a very mild negative correlation between two of the ordinal position measures and severity of crime, such that prisoners convicted of more severe crimes were slightly more likely to appear before the judge earlier in each session. Note that this correlation predicts that rulings early in the sequence would be less likely to favor the

felon, which is the opposite of what we find. A very mild positive correlation emerged between two other ordinal position measures and recidivism, indicating that recidivists were slightly more likely to appear later in the day. In this regard, several points are noteworthy. First, the correlations with recidivism are small and are only significant for the overall day ordinal position counter but not the session ordinal position counter; thus, they cannot explain the spikes in favorable decisions after a break. Second, note that the 4 (of 20) significant correlations are small and in opposite directions of each other—they are not consistent and, thus, do not appear to indicate a pattern of systematic ordering of the cases that might be giving rise to our findings.

In a related analysis we examined the mean level of prisoner characteristics for the three prisoners that appeared before and after each of the two daily breaks. This analysis leads to similar conclusions as the ones indicated by the correlations. There were no significant differences between the first three cases and the last three cases in a session with regard to the percentage of prisoners with a rehabilitation plan ($P = 0.675$; first three: 98.1%; last three: 98.5%), months of incarceration ($P = 0.24$; first three: $M = 31.43$; SD = 40.41; last three: $M = 28.2$; SD = 31.99), and number of previous incarcerations ($P = 0.695$; first three: $M = 1.91$; SD = 1.53; last three: $M = 1.95$; SD = 1.51). Finally, crime severity was higher ($P = 0.04$) in the first three cases ($M = 2.92$; SD = 1.03) than the last three cases in a session ($M = 2.77$; SD = 0.91), a pattern that predicts the opposite of the effect we find because presumably crime severity should decrease likelihood of release.

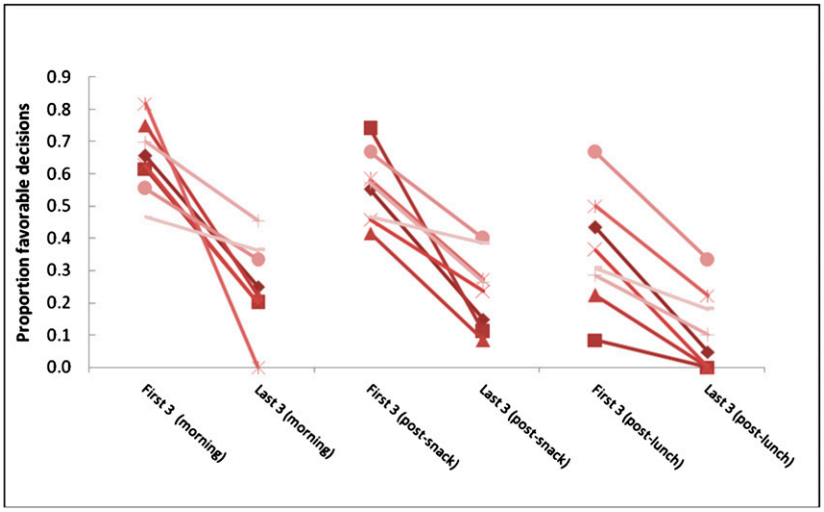

Fig. S1. The proportion of favorable decisions as a function of judge and ordinal position within a session. The data points reflect proportions for the first three versus last three decisions in each of the three sessions, for each judge. On average a data point reflects 16.00 decisions (min = 3, max = 27, SD = 7.12).

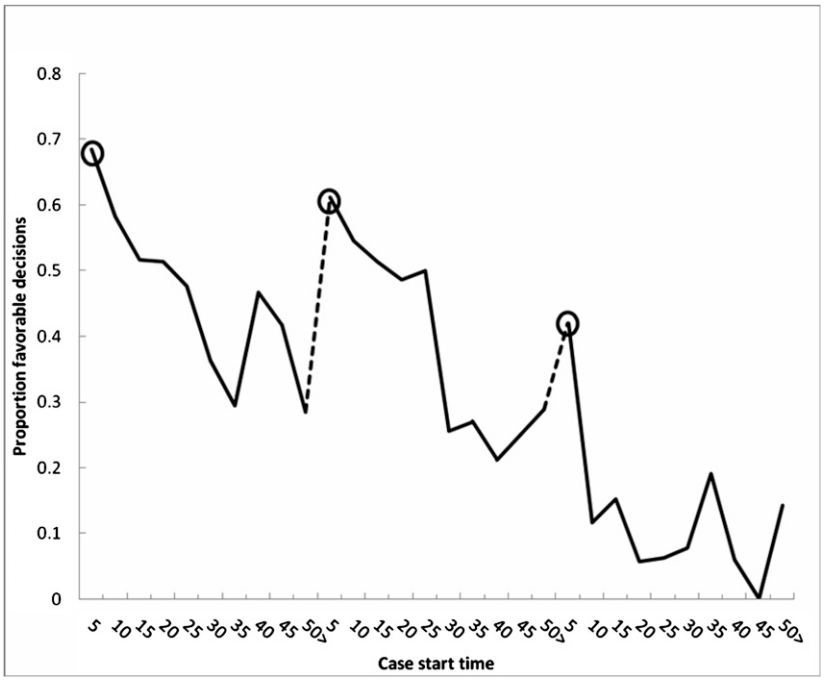

Fig. S2. Proportion of rulings in favor of prisoners by cumulative minutes of deliberation. Circled points indicate cases that commenced in the first 5 min of each of the three decision sessions; tick marks on the *x* axis denote 5-min intervals save for the last tick mark, which represents all cases that began after more than 50 min; the dotted lines denote food breaks. We combined all of the cases that began after more than 50 min so that each data point would reflect at least 10 cases.

Table S1. Results of analysis that includes only parole requests

	Specification			
Variable	1	2	3	4
Overall decision count	−0.075*** (0.025)	—	−0.080*** (0.026)	—
Overall count including nondecisions	—	−0.101*** (0.022)	—	−0.106*** (0.023)
Session 1/decision 1	1.016** (0.435)	0.876** (0.433)	—	—
Session 1/decision 2	1.444*** (0.451)	1.359*** (0.449)	1.480*** (0.458)	1.389*** (0.448)
Session 1/decision 3	−0.007 (0.454)	−0.088 (0.452)	−0.076 (0.460)	−0.117 (0.457)
Session 2/decision 1	1.310*** (0.403)	1.063*** (0.407)	1.288*** (0.407)	1.051** (0.410)
Session 2/decision 2	0.042 (0.411)	−0.181 (0.416)	−0.031 (0.414)	−0.234 (0.417)
Session 2/decision 3	1.035** (0.411)	0.833** (0.415)	0.960** (0.413)	0.780* (0.416)
Session 3/decision 1	3.079*** (0.474)	2.947*** (0.479)	3.001*** (0.475)	2.894*** (0.480)
Session 3/decision 2	1.035** (0.535)	0.859 (0.543)	0.972* (0.538)	0.817 (0.546)
Session 3/decision 3	−0.196 (0.800)	−0.322 (0.805)	−0.286 (0.803)	−0.379 (0.807)
Session 1	−0.373 (0.309)	−0.757** (0.322)	−0.526* (0.317)	−0.874*** (0.327)
Session 3	−1.119*** (0.392)	−0.771* (0.403)	−0.998** (0.397)	−0.681* (0.408)
Severity of offense	0.017 (0.111)	0.030 (0.112)	−0.037 (0.117)	−0.014 (0.118)
Previous imprisonments	−0.193*** (0.063)	−0.186*** (0.064)	−0.184*** (0.066)	−0.176*** (0.066)
Months served	−0.003 (0.003)	−0.003 (0.003)	−0.003 (0.003)	−0.003 (0.003)
Rehabilitation program	2.971*** (1.085)	2.944*** (1.098)	2.387** (1.107)	2.372** (1.134)
Ethnicity (0 = Jew, 1 = Arab)	−0.182 (0.186)	−0.207 (0.187)	−0.136 (0.191)	−0.158 (0.192)
Sex (0 = male, 1 = female)	−0.528 (0.340)	−0.532 (0.341)	−0.510 (0.345)	−0.523 (0.412)
Proportion favorable decisions	—	—	0.704* (0.407)	0.423 (0.411)
−2 Log likelihood	794.519	781.166	745.042	732.443

This table is analogous to Table 1, but with a restricted sample size in which only parole requests were included. The results of this fixed-effect logistic regression analysis are very similar to those presented in Table 1. SEs in parentheses. *$P < 0.10$, **$P < 0.05$, ***$P < 0.01$.

Table S2. Results of the analysis in which the two judges who most frequently occurred in the sample are excluded

	Specification	
Variable	1	2
Overall decision count	−0.034 (0.028)	−0.043 (0.029)
Session 1/decision 1	0.783* (0.467)	—
Session 1/decision 2	1.484*** (0.492)	1.563*** (0.496)
Session 1/decision 3	0.789* (0.453)	0.788* (0.456)
Session 2/decision 1	1.071** (0.459)	1.005** (0.458)
Session 2/decision 2	0.339 (0.448)	0.270 (0.449)
Session 2/decision 3	0.739* (0.432)	0.690 (0.433)
Session 3/decision 1	3.000*** (0.526)	2.899*** (0.526)
Session 3/decision 2	0.913* (0.539)	0.807 (0.544)
Session 3/decision 3	0.024 (0.687)	−0.083 (0.690)
Session 1	0.018 (0.351)	−0.169 (0.357)
Session 3	−1.176*** (0.380)	−1.012*** (0.386)
Severity of offense	0.249* (0.134)	0.245* (0.137)
Previous imprisonments	−0.212*** (0.076)	−0.177** (0.076)
Months served	−0.008** (0.004)	−0.008** (0.003)
Rehabilitation program	2.322*** (0.828)	1.863** (0.877)
Ethnicity (0 = Jew, 1 = Arab)	−0.126 (0.199)	−0.067 (0.205)
Sex (0 = male, 1 = female)	0.043 (0.349)	0.045 (0.362)
Proportion favorable decisions	—	0.880** (0.430)
−2 Log likelihood	670.646	629.118

Note that this table is based on a smaller sample size (n = 653). We chose to drop these two specific judges and not others because, due to their relative frequency, they were overrepresented in our sample. SEs in parentheses. *P < 0.10, **P < 0.05, ***P < 0.01.

Table S3. Results of the analysis presented in which each of the eight judges are excluded one at a time (excludes Judge 1):

	Specification	
Variable	1	2
Overall decision count	−0.070*** (0.025)	−0.080*** (0.026)
Session 1/decision 1	0.636* (0.407)	—
Session 1/decision 2	1.382*** (0.432)	1.443*** (0.435)
Session 1/decision 3	0.414 (0.390)	0.397 (0.393)
Session 2/decision 1	1.162*** (0.407)	1.144*** (0.407)
Session 2/decision 2	0.288 (0.387)	0.249 (0.387)
Session 2/decision 3	0.835** (0.380)	0.808** (0.380)
Session 3/decision 1	2.465*** (0.455)	2.378*** (0.454)
Session 3/decision 2	0.813* (0.500)	0.732 (0.503)
Session 3/decision 3	−0.238 (0.673)	−0.317 (0.675)
Session 1	−0.186 (0.296)	−0.326 (0.300)
Session 3	−1.042*** (0.349)	−0.904** (0.354)
Severity of offense	0.163 (0.111)	0.161 (0.113)
Previous imprisonments	−0.228*** (0.066)	−0.185*** (0.065)
Months served	−0.005*(0.003)	−0.005(0.003)
Rehabilitation program	2.276 (0.813)	1.798** (0.848)
Ethnicity (0 = Jew, 1 = Arab)	−0.145 (0.170)	−0.136 (0.175)
Sex (0 = male, 1 = female)	−0.166 (0.331)	−0.098 (0.340)
Proportion favorable decisions	—	0.843** (0.376)
−2 Log likelihood	898.328	845.734

Each table S3–S10 presents the results of a fixed-effect logistic regression analysis for seven rather than eight judges. SEs in parentheses. *P < 0.10, **P < 0.05, ***P < 0.01.

Table S4. Results of the analysis excluding Judge 2:

	Specification	
Variable	1	2
Overall decision count	−0.059*** (0.022)	−0.062*** (0.023)
Session 1/decision 1	1.015** (0.419)	—
Session 1/decision 2	1.445*** (0.425)	1.492*** (0.430)
Session 1/decision 3	0.665* (0.393)	0.644* (0.397)
Session 2/decision 1	0.941** (0.386)	0.921** (0.390)
Session 2/decision 2	0.274 (0.374)	0.228 (0.378)
Session 2/decision 3	0.653* (0.371)	0.607* (0.374)
Session 3/decision 1	3.410*** (0.493)	3.340*** (0.494)
Session 3/decision 2	0.949** (0.480)	0.867* (0.484)
Session 3/decision 3	−0.150 (0.669)	−0.237 (0.673)
Session 1	−0.287 (0.275)	−0.452 (0.284)
Session 3	−1.142*** (0.341)	−1.013*** (0.347)
Severity of offense	0.080 (0.109)	0.039 (0.115)
Previous imprisonments	−0.233*** (0.067)	−0.237*** (0.071)
Months served	−0.007**(0.003)	−0.007**(0.003)
Rehabilitation program	2.572*** (0.830)	2.083** (0.879)
Ethnicity (0 = Jew, 1 = Arab)	−0.205 (0.177)	−0.136 (0.182)
Sex (0 = male, 1 = female)	−0.100 (0.312)	−0.030 (0.322)
Proportion favorable decisions	—	0.979*** (0.368)
−2 Log likelihood	906.889	849.150

SEs in parentheses. *$P < 0.10$, **$P < 0.05$, ***$P < 0.01$.

Table S5. Results of the analysis excluding Judge 3:

	Specification	
Variable	1	2
Overall decision count	−0.076*** (0.021)	−0.079*** (0.021)
Session 1/decision 1	0.892** (0.389)	—
Session 1/decision 2	1.250*** (0.392)	1.276*** (0.396)
Session 1/decision 3	0.294 (0.365)	0.252 (0.370)
Session 2/decision 1	0.996*** (0.370)	1.018*** (0.374)
Session 2/decision 2	0.272 (0.349)	0.238 (0.352)
Session 2/decision 3	0.671** (0.351)	0.650* (0.353)
Session 3/decision 1	2.813*** (0.435)	2.735*** (0.435)
Session 3/decision 2	0.937** (0.457)	0.863* (0.460)
Session 3/decision 3	−0.330 (0.662)	−0.403 (0.664)
Session 1	−0.422* (0.254)	−0.561** (0.260)
Session 3	−1.120*** (0.324)	−0.981*** (0.329)
Severity of offense	0.068 (0.098)	0.024 (0.102)
Previous imprisonments	−0.236*** (0.061)	−0.226*** (0.063)
Months served	−0.004 (0.003)	−0.003 (0.003)
Rehabilitation program	2.419*** (0.812)	1.897** (0.846)
Ethnicity (0 = Jew, 1 = Arab)	−0.209 (0.160)	−0.203 (0.165)
Sex (0 = male, 1 = female)	−0.044 (0.318)	−0.040 (0.323)
Proportion favorable decisions	—	0.995*** (0.341)
−2 Log likelihood	1064.794	1000.208

SEs in parentheses. *$P < 0.10$, **$P < 0.05$, ***$P < 0.01$.

Table S6. Results of the analysis excluding Judge 4:

	Specification	
Variable	1	2
Overall decision count	−0.077*** (0.022)	−0.077*** (0.022)
Session 1/decision 1	0.704* (0.397)	—
Session 1/decision 2	1.342*** (0.415)	1.383*** (0.421)
Session 1/decision 3	0.493 (0.385)	0.446 (0.389)
Session 2/decision 1	0.908** (0.380)	0.921** (0.383)
Session 2/decision 2	0.286 (0.364)	0.253 (0.367)
Session 2/decision 3	0.929** (0.370)	0.904** (0.371)
Session 3/decision 1	2.495*** (0.461)	2.424*** (0.461)
Session 3/decision 2	1.088** (0.480)	1.038** (0.482)
Session 3/decision 3	−0.179 (0.676)	−0.243 (0.679)
Session 1	−0.373 (0.261)	−0.509* (0.267)
Session 3	−1.079*** (0.351)	−0.963*** (0.356)
Severity of offense	0.039 (0.100)	−0.004 (0.105)
Previous imprisonments	−0.260*** (0.065)	−0.255*** (0.069)
Months served	−0.003 (0.003)	−0.003(0.003)
Rehabilitation program	2.105** (0.828)	1.684** (0.862)
Ethnicity (0 = Jew, 1 = Arab)	−0.282** (0.165)	−0.243 (0.170)
Sex (0 = male, 1 = female)	−0.421 (0.341)	−0.417 (0.346)
Proportion favorable decisions	—	1.058*** (0.360)
−2 Log likelihood	996.649	936.619

SEs in parentheses. *$P < 0.10$, **$P < 0.05$, ***$P < 0.01$.

Table S7. Results of the analysis excluding Judge 5:

	Specification	
Variable	1	2
Overall decision count	−0.076*** (0.021)	−0.077*** (0.021)
Session 1/decision 1	0.701* (0.387)	—
Session 1/decision 2	1.260*** (0.395)	1.330*** (0.401)
Session 1/decision 3	0.267 (0.362)	0.244 (0.365)
Session 2/decision 1	1.037*** (0.369)	1.051*** (0.372)
Session 2/decision 2	0.210 (0.350)	0.180 (0.352)
Session 2/decision 3	0.796** (0.354)	0.775** (0.355)
Session 3/decision 1	3.021*** (0.456)	2.965*** (0.456)
Session 3/decision 2	0.703 (0.514)	0.638 (0.516)
Session 3/decision 3	−0.097 (0.674)	−0.152 (0.676)
Session 1	−0.286 (0.252)	−0.393 (0.257)
Session 3	−1.227*** (0.345)	−1.124*** (0.350)
Severity of offense	0.009 (0.099)	−0.029 (0.103)
Previous imprisonments	−0.246*** (0.061)	−0.234*** (0.063)
Months served	−0.004(0.003)	−0.004(0.003)
Rehabilitation program	3.123*** (1.080)	2.600** (1.109)
Ethnicity (0 = Jew, 1 = Arab)	−0.219 (0.162)	−0.206 (0.167)
Sex (0 = male, 1 = female)	−0.192 (0.301)	−0.146 (0.307)
Proportion favorable decisions	—	0.836** (0.345)
−2 Log likelihood	1054.537	991.893

SEs in parentheses. *$P < 0.10$, **$P < 0.05$, ***$P < 0.01$.

Table S8. Results of the analysis excluding Judge 6:

	Specification	
Variable	1	2
Overall decision count	−0.080*** (0.021)	−0.081*** (0.021)
Session 1/decision 1	0.913** (0.388)	—
Session 1/decision 2	1.541*** (0.407)	1.571*** (0.411)
Session 1/decision 3	0.277 (0.362)	0.221 (0.367)
Session 2/decision 1	1.054*** (0.365)	1.075*** (0.368)
Session 2/decision 2	0.309 (0.346)	0.280 (0.348)
Session 2/decision 3	0.663* (0.346)	0.640* (0.347)
Session 3/decision 1	2.890*** (0.436)	2.807*** (0.436)
Session 3/decision 2	0.913** (0.474)	0.831* (0.475)
Session 3/decision 3	−0.654 (0.782)	−0.728 (0.783)
Session 1	−0.342 (0.253)	−0.461* (0.258)
Session 3	−1.113*** (0.334)	−0.977*** (0.340)
Severity of offense	0.070 (0.101)	0.033 (0.105)
Previous imprisonments	−0.240*** (0.060)	−0.227*** (0.062)
Months served	−0.005*(0.003)	−0.005*(0.003)
Rehabilitation program	2.224*** (0.830)	1.895** (0.869)
Ethnicity (0 = Jew, 1 = Arab)	−0.178 (0.161)	−0.155 (0.166)
Sex (0 = male, 1 = female)	−0.142 (0.304)	−0.097 (0.310)
Proportion favorable decisions	—	0.856** (0.352)
−2 Log likelihood	1065.101	1003.123

SEs in parentheses. *$P < 0.10$, **$P < 0.05$, ***$P < 0.01$.

Table S9. Results of the analysis excluding Judge 7:

	Specification	
Variable	1	2
Overall decision count	−0.078*** (0.022)	−0.079*** (0.022)
Session 1/decision 1	0.973** (0.402)	—
Session 1/decision 2	1.448*** (0.412)	1.480*** (0.416)
Session 1/decision 3	0.280 (0.375)	0.224 (0.379)
Session 2/decision 1	1.219*** (0.383)	1.234*** (0.386)
Session 2/decision 2	0.258 (0.362)	0.210 (0.365)
Session 2/decision 3	0.837** (0.364)	0.805** (0.366)
Session 3/decision 1	2.890*** (0.467)	2.863*** (0.469)
Session 3/decision 2	0.967** (0.490)	0.913* (0.493)
Session 3/decision 3	−1.297 (1.060)	−1.371 (1.062)
Session 1	−0.355 (0.263)	−0.511* (0.269)
Session 3	−0.905** (0.354)	−0.809** (0.359)
Severity of offense	−0.040 (0.102)	−0.073 (0.107)
Previous imprisonments	−0.225*** (0.063)	−0.215*** (0.066)
Months served	−0.003(0.003)	−0.003 (0.003)
Rehabilitation program	1.791** (0.848)	1.174 (0.872)
Ethnicity (0 = Jew, 1 = Arab)	−0.216 (0.170)	−0.169 (0.174)
Sex (0 = male, 1 = female)	−0.363 (0.334)	−0.302 (0.343)
Proportion favorable decisions	—	0.973*** (0.369)
−2 Log likelihood	970.604	910.261

SEs in parentheses. *$P < 0.10$, **$P < 0.05$, ***$P < 0.01$.

Table S10. Results of the analysis excluding Judge 8:

	Specification	
Variable	1	2
Overall decision count	−0.113*** (0.024)	−0.112*** (0.025)
Session 1/decision 1	1.001** (0.423)	—
Session 1/decision 2	1.246*** (0.411)	1.283*** (0.417)
Session 1/decision 3	0.356 (0.378)	0.321 (0.382)
Session 2/decision 1	1.151*** (0.390)	1.167*** (0.393)
Session 2/decision 2	0.197 (0.360)	0.169 (0.362)
Session 2/decision 3	0.723** (0.362)	0.705** (0.364)
Session 3/decision 1	3.100*** (0.475)	3.050*** (0.474)
Session 3/decision 2	0.700 (0.501)	0.635 (0.504)
Session 3/decision 3	−0.194 (0.676)	−0.250 (0.679)
Session 1	−0.462* (0.273)	−0.596**(0.280)
Session 3	−0.829** (0.362)	−0.728** (0.367)
Severity of offense	0.041 (0.103)	0.019 (0.107)
Previous imprisonments	−0.262*** (0.064)	−0.256*** (0.068)
Months served	−0.004(0.003)	−0.004(0.003)
Rehabilitation program	3.457*** (1.094)	2.940*** (1.139)
Ethnicity (0 = Jew, 1 = Arab)	−0.174 (0.169)	−0.162 (0.174)
Sex (0 = male, 1 = female)	−0.210 (0.330)	−0.176 (0.337)
Proportion favorable decisions		0.970*** (0.355)
−2 Log likelihood	965.293	909.818

SEs in parentheses. *$P < 0.10$, **$P < 0.05$, ***$P < 0.01$.

Table S11. Nested model comparison tests

	Specification			
Variable	1	2	3	4
Within session decision count	−0.217*** (0.023)	−0.201*** (0.024)	—	—
Severity of offense	0.062 (0.089)	0.029 (0.093)	0.094 (0.085)	0.041 (0.090)
Previous imprisonments	−0.250*** (0.056)	−0.231*** (0.058)	−0.250*** (0.055)	−0.231*** (0.057)
Months served	−0.002 (0.002)	−0.002 (0.002)	−0.002 (0.002)	−0.001 (0.002)
Rehabilitation program	1.931** (0.773)	1.471* (0.784)	1.681** (0.756)	1.371* (0.774)
Ethnicity (0 = Jew, 1 = Arab)	−0.131 (0.146)	−0.112 (0.151)	−0.053 (0.139)	−0.027 (0.145)
Sex (0 = male, 1 = female)	−0.443 (0.292)	−0.353 (0.301)	−0.391 (0.278)	−0.306 (0.291)
Proportion favorable decisions	—	1.400*** (0.304)	—	1.664*** (0.297)
−2 Log likelihood	1239.434	1156.380	1351.338	1241.543

We conducted our fixed-effect logistic regression analysis with and without an ordinal position variable and without any of the session or session/position dummies to ascertain whether adding these variables increased model fit using a likelihood ratio test. In all cases, adding variables that denote ordinal position yield a significantly better fitting model (e.g., compare specifications 3 and 4 above with the regressions presented in Table 1; all $\chi^2 > 10$, $P < 0.001$). *$P < 0.10$, **$P < 0.05$, ***$P < 0.01$.

Table S12. Analysis of linear trend between breaks

Variable	Specification					
	1	2	3	4	5	6
Within session decision count	−0.205*** (0.032)	−0.202*** (0.032)	—	—	−0.194*** (0.050)	−0.193*** (0.050)
Within session decision count including nondecisions	—	—	−0.202*** (0.028)	−0.200*** (0.028)	—	—
Session 1	0.285 (0.291)	0.255 (0.339)	0.191 (0.292)	0.224 (0.340)	0.438 (0.390)	0.642 (0.453)
Session 3	−0.749** (0.342)	−0.711** (0.343)	−0.959*** (0.331)	−0.921*** (0.332)	−0.536 (0.425)	−0.525 (0.427)
Session 1 × Within session count	−0.022 (0.052)	−0.030 (0.057)	−0.020 (0.048)	−0.036 (0.054)	−0.016 (0.074)	−0.057 (0.082)
Session 3 × Within session count	−0.167** (0.080)	−0.162** (0.080)	−0.101 (0.065)	−0.098 (0.066)	−0.120 (0.092)	−0.111 (0.092)
Severity of offense	0.035 (0.093)	0.008 (0.096)	0.042 (0.094)	0.015 (0.097)	0.248* (0.130)	0.253* (0.133)
Previous imprisonments	−0.244*** (0.057)	−0.233*** (0.059)	−0.244*** (0.057)	−0.234*** (0.060)	−0.237*** (0.074)	−0.207*** (0.073)
Months served	−0.002 (0.003)	−0.002 (0.003)	−0.002 (0.002)	−0.002 (0.003)	−0.007** (0.003)	−0.007* (0.003)
Rehabilitation program	2.114*** (0.791)	1.520* (0.796)	2.052*** (0.797)	1.380* (0.795)	2.048*** (0.801)	1.421* (0.811)
Ethnicity (0 = Jew, 1 = Arab)	−0.171 (0.151)	−0.146 (0.155)	−0.179 (0.153)	−0.155 (0.157)	−0.151 (0.194)	−0.100 (0.199)
Sex (0 = male, 1 = female)	−0.122 (0.299)	0.070 (0.306)	−0.120 (0.303)	0.056 (0.310)	0.129 (0.346)	0.256 (0.358)
Proportion favorable decisions	—	0.643** (0.324)	—	0.554* (0.328)	—	0.584 (0.416)
−2 Log likelihood	1153.638	1090.567	1133.735	1073.548	687.343	647.001

This fixed-effect logistic regression analysis tests the robustness of a variable that indicates the ordinal position of a case within a decision session (e.g., after breakfast snack and until lunch), while controlling for case characteristics. The variables Session 1, Session 3, Rehabilitation Program, Ethnicity, and Sex are dummy variables as in previous analyses. The negative parameter estimate on the ordinal position variable indicates that the trend(s) apparent in Fig. 1 are statistically significant. Specifications 5 and 6 drop the two judges with the most observations as in Table S2. SEs in parentheses. *$P < 0.10$, **$P < 0.05$, ***$P < 0.01$.

Table S13. Results of analysis using cumulative minutes elapsed in a session

Variable	Specification	
	1	2
Cumulative minutes in session	−0.021*** (0.005)	−0.021*** (0.005)
Session 1	0.223 (0.287)	0.070 (0.294)
Session 3	−2.176*** (0.392)	−2.008*** (0.395)
Session 1 × Cumulative minutes	0.002 (0.007)	0.002 (0.007)
Session 3 × Cumulative minutes	0.015 (0.013)	0.012 (0.013)
Severity of offense	0.014 (0.103)	0.006 (0.103)
Previous imprisonments	−0.214*** (0.063)	−0.206*** (0.062)
Months served	−0.002 (0.003)	−0.002 (0.003)
Rehabilitation program	1.920* (1.085)	1.826* (1.087)
Ethnicity (0 = Jew, 1 = Arab)	−0.110 (0.166)	−0.107 (0.167)
Sex (0 = male, 1 = female)	−0.179 (0.321)	−0.179 (0.323)
Proportion favorable decisions	—	1.050*** (0.335)
−2 Log likelihood	987.238	976.434

The table presents fixed effects logistic regression specifications that were conducted to test the effect of cumulative minutes passed in a decision session on the likelihood of a favorable ruling. The negative and significant parameters for cumulative minutes suggest that as session times lengthened, judges were more likely to rule against the prisoner. Note that the second specification controls for the proportion of favorable decisions in the day (this specification drops the very first decision of the day). Ethnicity and sex are dummy variables. SEs in parentheses. *$P < 0.10$, **$P < 0.05$, ***$P < 0.01$.

Table S14. Results of analysis using both cumulative minutes and elapsed time in a session

	Specification	
Variable	1	2
Cumulative minutes in session	0.003 (0.005)	0.002 (0.005)
Within session decision count	−0.219*** (0.037)	−0.207*** (0.037)
Session 1	0.202 (0.174)	0.117 (0.179)
Session 3	−1.810*** (0.233)	−1.746*** (0.235)
Severity of offense	0.020 (0.105)	0.015 (0.105)
Previous imprisonments	−0.222*** (0.064)	−0.215*** (0.063)
Months served	−0.003 (0.003)	−0.002 (0.003)
Rehabilitation program	1.694 (1.081)	1.660 (1.083)
Ethnicity (0 = Jew, 1 = Arab)	−0.108 (0.168)	−0.105 (0.169)
Sex (0 = male, 1 = female)	−0.011 (0.324)	−0.024 (0.325)
Proportion favorable decisions	—	0.717** (0.342)
−2 Log likelihood	948.572	943.428

The table presents fixed-effects logistic regression specifications that were conducted to test the combined effect of cumulative minutes elapsed in a decision session and within session decision count on the likelihood of a favorable ruling. The negative and significant parameter for decision count, coupled with the nonsignificant parameter for cumulative minutes, suggests that the critical factor in evoking our order effect is the number of decisions made rather than the time elapsed. Note that the second specification controls for the proportion of favorable decisions in the day (this specification drops the very first decision of the day). Ethnicity and sex are dummy variables. SEs in parentheses. *$P < 0.10$, **$P < 0.05$, ***$P < 0.01$.

Table S15. Analysis of causal factors in judge's decision to take a break

	Specification	
Variable	1	2
Within session decision count	0.144*** (0.025)	0.152*** (0.027)
Severity of offense	0.053 (0.148)	0.053 (0.149)
Previous imprisonments	−0.018 (0.078)	−0.013 (0.078)
Months served	0.002 (0.004)	0.003 (0.004)
Rehabilitation program	−0.954 (0.649)	−1.126 (0.667)
Ethnicity (0 = Jew, 1 = Arab)	0.345 (0.233)	0.341 (0.234)
Sex (0 = male, 1 = female)	−0.258 (0.461)	−0.164 (0.466)
Proportion favorable decisions	—	1.284** (0.518)
−2 Log likelihood	569.651	558.792

The table presents fixed-effects logistic regression specifications that were conducted to test determinants of a judge's decision to take a break. None of the variables related to a prisoner's case were significant; that is, whatever type of case a judge had seen did not prompt his or her desire to take a break. Within session decision count and a variable that controls for the proportion of favorable decisions in the day (this specification drops the very first decision of the day) were significant. Note that the latter was positive, meaning that as a judge had made more favorable decisions, he or she was more likely to take a break. Ethnicity and sex are dummy variables. SEs in parentheses. *$P < 0.10$, **$P < 0.05$, ***$P < 0.01$.

Table S16. Correlations between control variables and ordinal position indicators

Ordinal position variable	Severity of offense	Previous imprisonments	Months served to date	Rehabilitation program
Session decision count	−0.053 ($P = 0.077$)	0.027 ($P = 0.371$)	−0.029 ($P = 0.340$)	0.028 ($P = 0.346$)
Session count including nondecisions	−0.033 ($P = 0.274$)	0.035 ($P = 0.242$)	−0.010 ($P = 0.734$)	0.015 ($P = 0.615$)
Cumulative minutes in session	−0.035 ($P = 0.280$)	0.013 ($P = 0.682$)	−0.004 ($P = 0.905$)	−0.022 ($P = 0.491$)
Overall decision count	−0.081 ($P = 0.007$)	0.062 ($P = 0.038$)	−0.047 ($P = 0.115$)	0.017 ($P = 0.570$)
Overall count including nondecisions	−0.047 ($P = 0.117$)	0.075 ($P = 0.012$)	−0.012 ($P = 0.692$)	0.011 ($P = 0.719$)

Pearson correlation coefficients between the ordinal position variables and the control variables used in our regressions (P values appear in parentheses). Columns refer to the different control variables used in our subsequent regression analyses. Rows refer to different representations of ordinal position.