Conservatism and Liberalism Predict Stimulus-Response Performance in Two Non-Ideological Cognitive Tasks

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Abstract

Intuitive thinking dictates that political or ideological orientation does not correlate with non-political decisions, therefore certainly not correlating with non-ideological cognitive tasks. Nevertheless, that is what happens in some cases. Previous neuropolitics studies found that liberals are more adept at dealing with novel information than conservatives. These findings suggest that conservatives and liberals possess different cognitive skills. In this paper two studies are executed for the purpose of testing whether this difference remains in alternative environmental settings. In doing so, two novel cognitive tasks are designed, such that one or another type of ideology is privileged conditioning on the cognitive environment that the tasks create. Experiment findings indicate that liberals commit fewer errors than conservatives in one kind of cognitive environment, while conservatives score higher in another.

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A rather recent—and growing—literature is narrowing down the distance between Biology and Psychology on one side and Political Science on the other. Various studies are beginning to show that political preferences and even political behavior are influenced by factors like personality traits, brain structure, hormone levels, and genes's alleles. This nascent research approach has been given the umbrella name of *Genopolitics*. Alford et al. (2005) is a seminal paper in the area; Smith et al. (2012) shows the importance of taking genetic inheritance as an explicative factor of political attitudes; Dawes et al. (2014) presents the mechanism through which genes may affect political behavior; Dawes et al. (2011) evidentiate how social preferences shapes political behavior. An outstanding survey of this literature can be found in Hibbing et al. (2014). In that book, the authors amass dozens of studies showing that political differences may be innate. Within *Genopolitics* there are studies dealing particularly with the issue of how brain processes might differ among individuals from distinct ideological groups. This area is called *Neuropolitics*, and our paper belongs to its domains. In *Neuropolitics* questions like "Are there any physiological differences between the brains of conservatives and liberals?", or "Do different parts of the brain show higher activity conditional on the subjects ideology?" are asked, for example. The present study draws from the findings in the literature answering those questions, and asks whether ideology can explain—at least in part—the performance on psycho-motor tasks that are divested from any ideological meanings.

Intuitive thinking dictates that political or ideological orientation does not correlate with non-political decisions, therefore certainly not correlating with non-ideological tasks. Expectations would imply that liberals should not outperform conservatives in a task that that requires clicking a button when the letter W appears on the computer monitor, and not clicking the button when the letter M appears. Nevertheless, evi-

dence suggests that indeed ideological preferences are correlated with non-ideological matters in some cases. Wilson et al. (1973) found correlations between ideology and art preferences. Weissflog et al. (2013) found correlations between political attitudes and neurophysiological responsivity. Carraro et al. (2011) offer evidence that conservatives pay greater attention to negative stimuli. Dodd et al. (2011) found that conservatives are less likely to be influenced by others, whereas liberals exhibit larger gaze-cuing effect. Schreiber et al. (2013) used functional imaging to demonstrate that the brains of liberals and conservatives differ in activity, while performing a risk-taking task. The underlying hypothesis in the relevant literature is that conservatives and liberals differ in non-ideological preferences and task performance because they show different physiological needs, or traits. For example, these different traits include cognitive flexibility, the need for order and closure, and openness to novel information. Finally, these needs are correlated with brain activity and structure. Kanai et al. (2011) found that an increased volume of gray matter in the anterior cingulate cortex is statistically significantly associated with liberalism, while an increased volume of grey matter in the right amygdala is statistically significantly correlated with conservatism. Notwithstanding the complexity of cerebral processes, it has been shown that the amygdala plays a greater role in intuitive threat response, for example, whereas the cortical region deals more prominently with logical decision-making. See Öhman (2005), Öhman et al. (2007), Zald (2003), Liddell et al. (2005), Carter et al. (1998), Opris (2014), Gehring (2002), and Downar (2001).

Previous studies, such as Amodio et al. (2007) and Jost et al. (2003), found that liberals are more adept at dealing with novel information than conservatives. Conservatives tend to show less cognitive flexibility, which is necessary when the environment improves a person's position if a previous decision is modified. This

findings suggest that conservatives and liberals possess different cognitive skills, or abilities; and one may inquire whether this divergence in cognitive styles is bounded within the ideological world. In Amodio et al. (2007), the authors found—via a standard *Go/No-Go* task—that the minds of conservatives and liberals work differently for non-politically-related tasks. Moreover, liberals demonstrate improved performance in a task in which it is optimal to deviate from the current path. Using a technical term from Neuroscience, conservatives have greater disinhibition which causes them to perform relatively poorly when the environment requires them to switch from a prompted behavior. When some behavior becomes habitual and we are required to stop it, we must inhibit it. The mental process that makes this possible is called "inhibition". A lack of inhibition, or "disinhibition", is the difficulty we have in stoping a habitual response after a stimulus that requires us to do so. As an example, suppose you are hammering a nail and a child puts her finger on the nail in the middle of a strike. Inhibition is required to prevent you from completing the strike. In this case, greater disinhibition would make it more difficult to hold the strike.

In this paper, two studies are executed, for the purpose of testing whether this difference remains in alternative environmental settings. The first study tests whether this liberal "advantage" remains present in a task in which disinhibition is a lesser issue, but in which the cognitive flexibility still plays a role. In doing so, a modified *Go/No-Go* task was designed, such that the adequacy of the response to a current aleatory stimulus depended on a previous stimulus, but without inducing a behavioral pattern. The expectation is that liberals would still outperform conservatives. The results suggest that the expectation is true. Liberals commit fewer errors than conservatives in the task, even though their response times to the stimuli are essentially equivalent. This finding is a strengthening of the findings in Amodio et al. (2007), since liberals

performed better even when disinhibition was taken out of the situation. The second study attempts to bring about an environment in which the conservative mindset is privileged. Here, due to the difficulty of creating such a context in tasks previously used, an original task was designed. In this task the subjects have to make fast choices between performing a complex action or a simpler action, and then performing the action. We expect that in such an environment, conservatives would perform better because they would choose to do the simpler action more frequently. We find evidence confirming this expectation. Conservatives choose the simpler action more frequently than liberals, and score higher in the overall task.

Neuropolitics: Previous Findings and Expectations

We know that individuals who support an ideology leaning toward the liberal side of the spectrum are more likely than conservatives to show openness to novelty, uncertainty tolerance, and cognitive complexity. Evidence for these claims can be found in Jost and Amodio (2011), Carney et al. (2008), Gerber et al. (2010), and Jost (2006). These correlations indicate a motivated basis to the formation of ideology, *i.e.*, the formation of one's ideology might have a psychophysiological input. The first study that linked ideology outcomes and domain-general processes was Amodio et al. (2007). In this article, a sample of 43 subjects performed a *Go/No-Go* task, while their brain activity was monitored via eletroencephalography. The task consisted of stimuli presented on a screen, which required a response, consisting of pushing or holding a button. The stimuli were either the letter *W* (*Go* stimulus) or *M* (*No-Go* stimulus). When the letter *W* appeared, the subjects were expected to push the button as quickly as possible. When the letter *M* appeared, they were expected to refrain from pushing the button. However, the letter *W* appeared more frequently

than the letter *M*, inducing a habitual response. When the letter *M* appears after a sequence of *W*'s, there is a conflict response. This conflict triggers a signal called error-related potential, which is associated with greater activity in the anterior cingulate cortex. The results demonstrated that the amplitude of the signal was lower for more conservative individuals. This lower amplitude in the signal from conservative subjects was expected, because the task posed a response conflict. Response conflicts and executive control are dealt with by the anterior cingulate cortex. The anterior cingulate cortex, in turn, is responsible for a more general process of decision-making. It is then activated more frequently when greater informational complexity exists in the environment. Because liberals are more open to novelty, tolerate ambiguity, and show greater cognitive flexibility, than conservatives, it is then expected that their cortical area would be more "evolved". However, there is no causality claim here. What has been uncovered is the link from ideology to psychological trait, from psychological trait to brain physiology, and from brain physiology to behavior.

In our first study, the superior performance of liberals is investigated to identify if it persists when the task (which will be explained presently) does not induce a habitual behavior. In such an absence, the greater disinhibition characteristic of conservatives is not a significant problem. In the task presented, there is no response pattern from which to change. On the other hand, the cognitive complexity of the task is preserved. The expected outcome is then a small—yet persistent—effect of ideology on executive control.

Commenting on their results, the authors in Amodio et al. (2007) argued that, presumably, conservatives would perform better in a task in which a more fixed type of response was optimal. Our second study addresses this claim. We develop a task which presents subjects with the possibility to choose their course of action. Although

the actions were the same throughout the different manipulations in the study, the optimal action varied with the specific treatment. In these manipulations no response pattern is induced—as it is the case in standard *Go/No-Go* tasks. The choice is between an action that requires greater cognitive flexibility and an action that requires less cognitive flexibility. The expectation is that conservatives outperform liberals when the task makes the action requiring less cognitive flexibility more rewarding.

STUDY 1

This study is based in a *Go/No-Go* task. In a standard *Go/No-Go* task, subjects' optimal decision is to hold the response (*No-Go* stimulus) after repeated *Go* stimuli induced a habitual response. In the present set up, no response pattern is induced. The letters *W* and *M* randomly appear on the screen with the same probability—250 trials—; each event lasting for one second. The subject is asked to quickly respond if the letter on the screen is the same as the previous one. Records are kept of (*i*) the time elapsed (in milliseconds) between the moment the letter appears and the moment the subject responds, and (*ii*) the errors the subject commits, *i.e.* responding to a *No-Go* stimulus and failing to respond to a *Go* stimulus. Subjects are incentivized to perform with precision by the provision of a reward. In some sessions subjects' scores are a function of response-to-stimuli time and number of errors they commit. In other sessions, subjects' scores are a function only of the number of errors they commit. For the task sessions in Brazil, the best performance won a local-bookstore gift card in the amount of R$ 1,000 (Brazilian Reals), roughly US$ 450. This kind of incentive has been proven a better one than individual small payments, given our pool of potential subjects. In the Brazilian university this study took place, the students tend to come from high income families. They prefer the small chance of

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winning a significant prize than the certainty of earning an amount such as R\$ 15; even though the expected utility may be the same or even less in the case of the gift card. In a follow up survey, We asked subjects whether they would prefer the gift card or smaller individualized payments. Two thirds of them said to prefer the gift card. The response time was used to break ties. For the sessions in the United States we converted each correct response to \$0.0096. The results for these different samples—Brazil and U.S.—are similar. The effect size is slightly greater in the first sample. Both effects have the same sign and significance, though. The results below are from the samples combined. Questions regarding ideology and a control variable are asked in a follow-up survey. This survey provides a more detailed description of subjects' ideology, which is not addressed in the recruitment stage to avoid biasing the subjects' behavior in the study.

Carter et al. (1998) and Nieuwenhuis et al.(2003) demonstrate that when a response conflict exists, the anterior cingulate cortex shows a higher level of activity than usual. In Amodio et al. (2007), the authors identified increased anterior cingulate cortex activity in the brains of liberals, while performing a standard *Go/No-Go* task. The authors also claim that liberals showed enhanced behavioral accuracy on the same task, indicated by error related-negativity amplitudes. As there is no induced response pattern in the present study, a *Go* stimulus should not cause a disinhibition problem. Nevertheless, the complexity of the task still requires cognitive flexibility. The complexity of the task comes from the brief time for responding, the randomness of the stimuli, the need to mentally retain a particular stimulus for a period of time, followed by the need to discard it afterwards, and the overall ability to modify behavior, as appropriate. Given these task characteristics, as well as in consideration of the previous findings, we have the following:

Prediciton 1 *Liberals are expected to outperform conservatives in this study, i.e., liberals are expected to commit fewer errors than conservatives.*

However, it is also expected that this difference in behavioral accuracy will not be substantial, since there is no major disinhibition problem involved. For the control variable, we expect that individuals who frequently play video games perform better.

Data

Within this study, a total of 99 students answered a recruitment survey, performed the required task in the laboratory, and completed a follow up survey.[1] We ran two sets of sessions. The first set took place at a Brazilian university, in which 45 students participated. The second set of sessions occurred at an American university, with 58 students participating. The study was conducted between October, 2013 and March, 2014.

A conservatism index was created based upon questions regarding abortion rights, same-sex marriage, the legal use and sale of marijuana, gun control, and taxation. This index ranged from 0 to 11, with "11" representing the most conservative. After recruitment via *Survey Monkey* and *Qualtrics*, subjects were scheduled a time slot. Once in the laboratory, they were given verbal instructions on how to perform the task, but not about the specific nature of the study. They also received a sheet with the instructions and were told that they could read them at their own pace and ask any questions. Finally, they provided signed agreements. The instructions and task took about 10 minutes.

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[1] In total, 103 students participated, but four did not finish the study.

Results

In total, 24,750 actions were taken. The percentage of errors was 2.9%, indicating that the subjects understood how the task should be completed. We found a correlation between the number of errors committed and ideology ($r(99) = 0.25$, $P < 0.05$). Confirming the prediction, liberals outperformed conservatives in the task, as is illustrated in figures 1 and 2. Figure 1 shows that the the number of errors committed increases as the conservatism index increases. The central line depicts the linear model estimate, and the shaded area comprises the 95% confidence interval. In order to have a better sense of group performance, we aggregated subjects in two groups. Those whose conservatism index was 0, 1, or 2 were labeled as leaning left (55.6% of the sample).[2] We could not do a 50-50 cut in the sample because many subjects have the same position on the index. Figure 2 illustrates the effect on the aggregated data. The central horizontal line in the box on the left represents the median number of errors committed by the subjects more to the left of the ideological spectrum. The median for the liberals is 5 and the median for the conservatives is 8. The white area between the top and bottom horizontal lines encompasses 50% of the group sample. The dots above the vertical line are subjects whose score is unusual in relation to their group performance. Comparing the two boxes we see that those leaning right committed more errors on average in this task. Curiously, the response time was the same for the two groups (figures 3 and 4). Figures 3 and 4, vis-a-vis figures 1 and 2, respectively, illustrate the fact that albeit committing fewer mistakes, liberals take about the same amount of time to respond to the stimuli. The correlation between ideology and time is null and not statistically significant ($r(99) = -0.04, P > 0.72$). The median time to respond is 0.458 seconds for both liberals and conservatives.

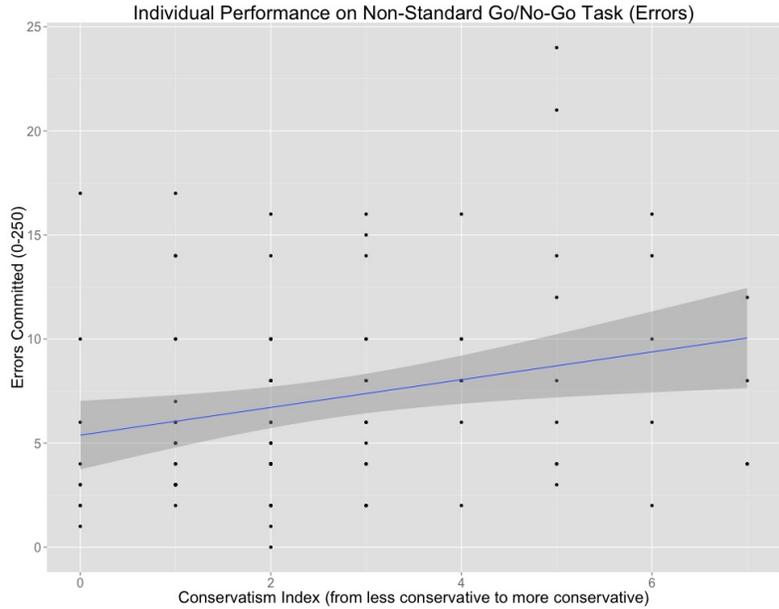[2]The results are robust to different cut-points.

Figure 1

These results suggest that liberals possess the trait of cognitive flexibility in a more general sense than previously thought. They perform better even when there is no disinhibition issue, and they do not take additional time to achieve that finer accuracy.

Table 1 reports on a regression explaining errors as a function of conservatism and gaming habit. In column 1 we see that there is a statistically significant relation between ideology (*Conservatism Index*) and the number of errors the subject committed. For each unit increase in the ideological index, 0.666 more errors are expected. The coefficient is statistically significant with a *p-value* of 0.05. This finding corroborates our expectation that liberals perform better in the task. Also, the effect is small, as expected, since the task, albeit requiring cognitive flexibility, does not have a disinhibition issue. Column 2 depicts the regression using a control variable. *Gamer* indicates that the subject plays video games frequently. The coefficient of ideology increases in size and statistical significance. The coefficient of the control variable is not statistically significant. In columns 3 and 4 we have the regressions
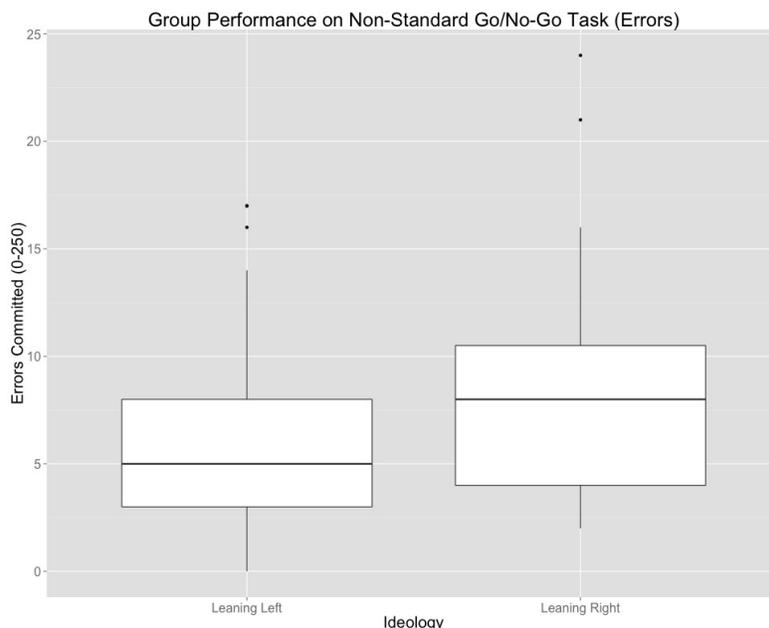
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Figure 2

explaining errors as a function of ideology when this is a binary measure (*Ideology (binary)*). The simple model in column 3 shows a statistically significant coefficient of ideology. An individual classified as conservative is expected to commit 2.509 more errors in this task than an individual classified as liberal. Column 4 shows the model with the control variable Gamer. The coefficient of ideology increases and maintains the same level of statistical significance. The coefficient of the control variable is not statistically significant.

STUDY 2

This study involved the conception of a original cognitive task. For presentations purposes we are labeling it "*Squares* task". With this "game", so to speak, we can further investigate whether there exist situations in which a cognitive style that favors a less flexible way of playing perform better than a cognitive style in which
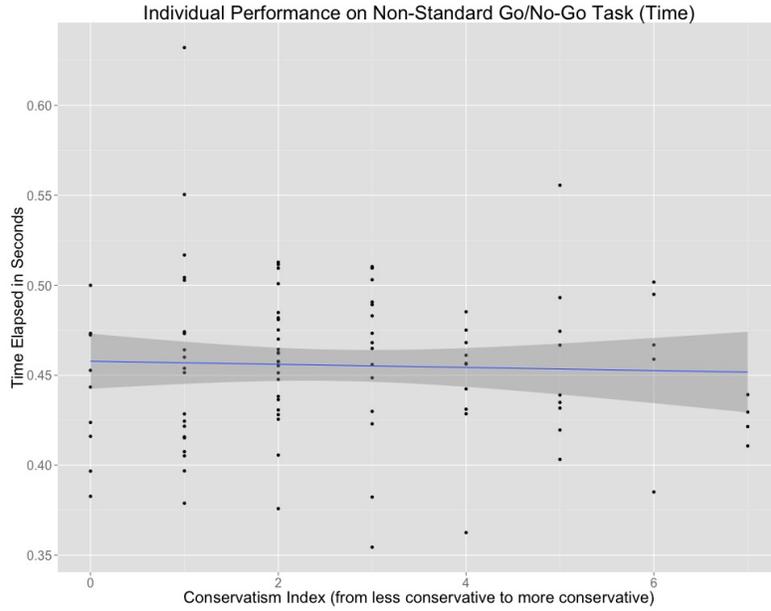
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Figure 3

Table 1: *OLS Regression of Errors Committed on Ideology*

	Dependent variable:			
	Errors			
	(1)	(2)	(3)	(4)
Conservatism Index	0.666*	0.692**		
	(0.257)	(0.262)		
Ideology (binary)			2.509**	2.611**
			(0.945)	(0.962)
Gamer (binary)		0.368		0.386
		(0.625)		(0.624)
Constant	5.381***	5.744***	6.036***	6.443***
	(0.830)	(1.037)	(0.630)	(0.912)
Observations	99	99	99	99
R^2	0.065	0.068	0.068	0.071
Adjusted R^2	0.055	0.049	0.058	0.052

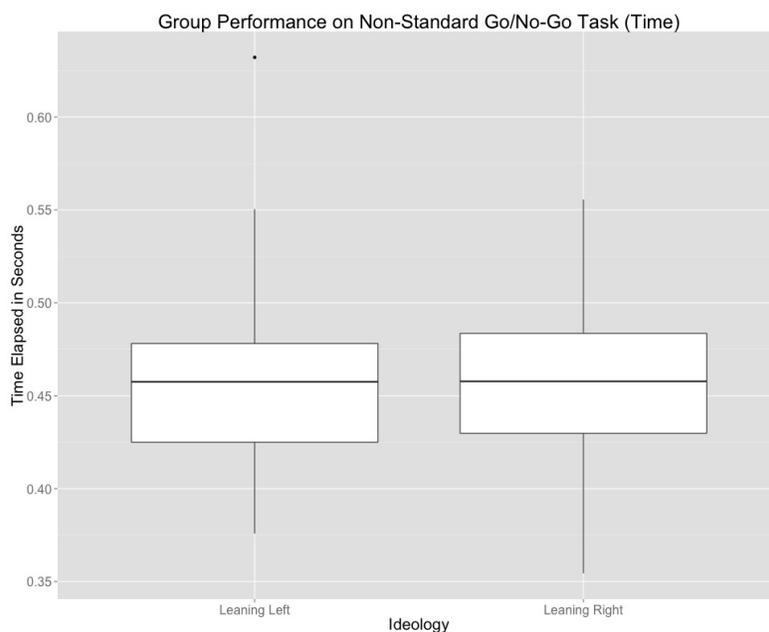| *Note:*	˙p<0.1; *p<0.05; **p<0.01; ***p<0.001

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Figure 4

cognitive flexibility is greater. As has been substantiated in the recent literature combining neuroscience and politics, as well as in our first study, tasks that prompt action switching to be the optimal response to a stimulus tend to favor liberals more than conservatives. With the *Squares* task we can create situations in which greater cognitive flexibility not necessarily produces the best outcome. The main point we are after is an existence result. We investigate whether there exists an environment for which the cognitive style of conservatives is better suited to perform a non-ideological cognitive task.

The task consists of responding rapidly to stimuli. The stimuli are colored squares appearing on the computer monitor. The disposition of the squares can be seen in figure 5. The colors of the squares can be purple, white, or green. The square in the top row is never white; it can be only purple or green. There is always a purple, a white, and a green square in the bottom row. The colors of the squares change
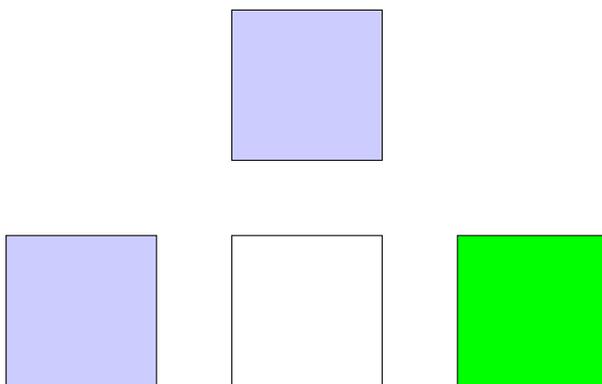
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Figure 5

randomly every 0.35 seconds. The colors of the squares change simultaneously. There are two possible actions the subjects can take each time the colors change (a trial): they can indicate the position of the white square, or they can indicate the position of the square in the bottom row which has the same color as the square in the top row—we call this action "matching." In order to indicate the position of a square, they must press the arrow keys. Subjects should press the left arrow key to indicate "left", the down arrow key to indicate "center", and the right arrow key to indicate "right". As an example, if the colors of the squares is as in Figure 5, and the subject wants to indicate the position of the white square, she must press the down arrow key. If she wants to indicate the position of the square in the bottom row which has the same color as the square in the top row, she must press the left arrow key. The manipulation has 60 trials.

Indicating the position of the square in the bottom row which has the same color as the square in the top row is more difficult, given the speed of the treatments, than to just indicate the position of the white square. Indicating the position of the white square requires only finding the position of that square. Indicating the position of the square in the bottom row which has the same color of the square in the top

row requires first internalizing what color the square in the top row has, and then finding out where the square of same color in the bottom row is located. In order to make the matching more valuable, we incentivized it. Each correct matching yields 1 point; each white square correctly indicated yields 0.8 points. Each point is converted into $0.0191.[3] This task differs from other cognitive-motor tasks in the sense that it requires a choice between possible "strategies." In *Go/No-Go* tasks there is only one correct action each trial. Here, there are two. However, the speed of the treatment still requires some degree of cognitive flexibility. We need a speedy treatment because we do not want the task to be simply a matter of choice. A good performance in this task then requires a combination of the "right" strategy and the ability to correctly undertake the chosen strategy. We have the following expectations:

Prediciton 2 *Conservatives will outperform liberals.*

Prediciton 3 *Conservatives will choose the simpler task more frequently than liberals.*

When we say *performance* we mean the subject's total score in the manipulation. The reason we expect the first result is that conservatives, because they presumably have a more rigid mindset, must adopt a strategy that favors the simpler task, *i.e.*, indicating the position of the white square. Hence, the second prediction helps explaining the first.

As control variables, we asked the subjects whether they usually play video games (*Gamer*), whether they felt anxious during the task (*Anxious (binary)*), and whether they are left- or right-handed (*Right-Handedness)*). We expect those who usually play video games to perform better than those who do not; we expect those who felt anxious during the task to have performed worse than those who did not; based on the

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[3]As the subjects participated in a variety of manipulations and tasks, they could earn up to $28 in the session.

theory solely, we have no expectations regarding the effect of handedness. However, one might ask whether the keyboard disposition favors the right-handed subjects, since the keys used in the study are more to the right of the keyboard. In this way, the left-handed subjects would face a less comfortable set up. It is reasonable then to expect that right-handed subjects perform better in this study.

Data

48 subjects completed the study.[4] Once in the laboratory they received sheets with the instructions for the tasks. After completing the tasks they answered a follow-up survey on *Qualtrics*, received the payment vouchers that reflected their individual performances on the tasks and were dismissed. Each session lasted for one hour. On average, subjects made $16.24. The follow-up survey contained questions about policy preferences.[5] These question were used to construct a conservatism index, ranging from 0 to 11, where 0 is the least conservative and 11 is the most conservative.

Results

In this study, 2,880 actions were taken. We found a sizable and statistically significant correlation between ideology and performance on the task ($r(48) = 0.41, P < 0.001$). Confirming Prediction 2, conservatives outperformed liberals in this task. In figure 6 we can see that the more conservative the participant is, the more she scores on the task. The central line indicates the linear model estimate for this relation. The shaded area encompass the 95% confidence interval. This result confirms our expectation that

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[4]In total, 58 students participated, but data from ten of them could not be gathered. Among this ten, one of them accidentally quit the program in the middle of the task; five of them did not complete the follow-up survey; and four of them entered a wrong identity number while completing the survey.

[5]As in the previous study, the questions were about subjects preferences towards abortion rights, same-sex marriage, gun control, marijuana legal use and sale, and taxation.
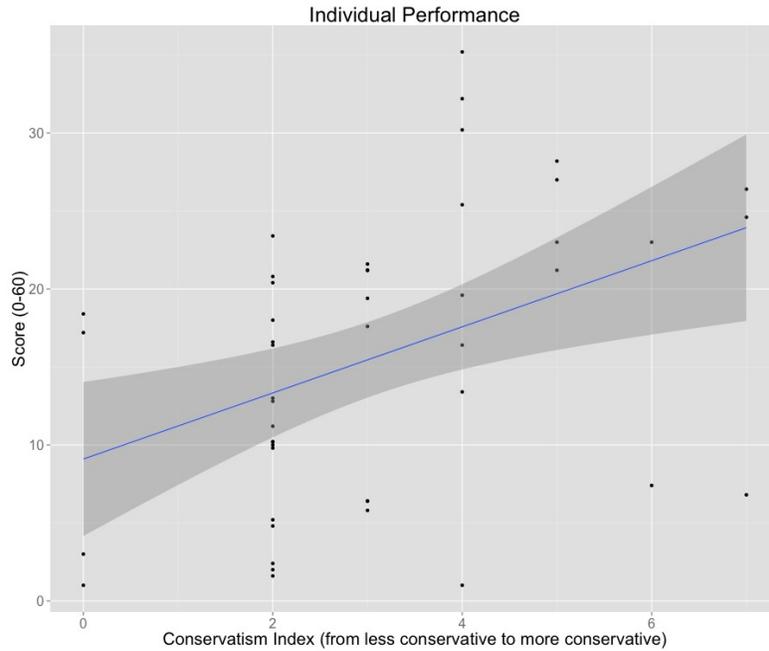
Figure 6

conservatives would perform better than liberals in this task. Figure 7 is evidence for our Prediction 3—that the superior performance of conservatives is due to the more frequent choice of the simpler action. As we can see, the more conservative the individual is, the more she chooses to locate the white squares. Again, the central line indicates the linear model estimate for this relation and the shaded area encloses the 95% confidence interval.

Figure 8 depicts the performance aggregated on a group level. The group of individuals leaning more to the left of the ideological spectrum has a median score of 12.8, while the group leaning more to the right has a median score of 21.2. A comparison of the two boxes indicates that conservatives score higher than liberals in this task, on average. Figure 9 indicates that conservatives choose the simpler task more frequently.

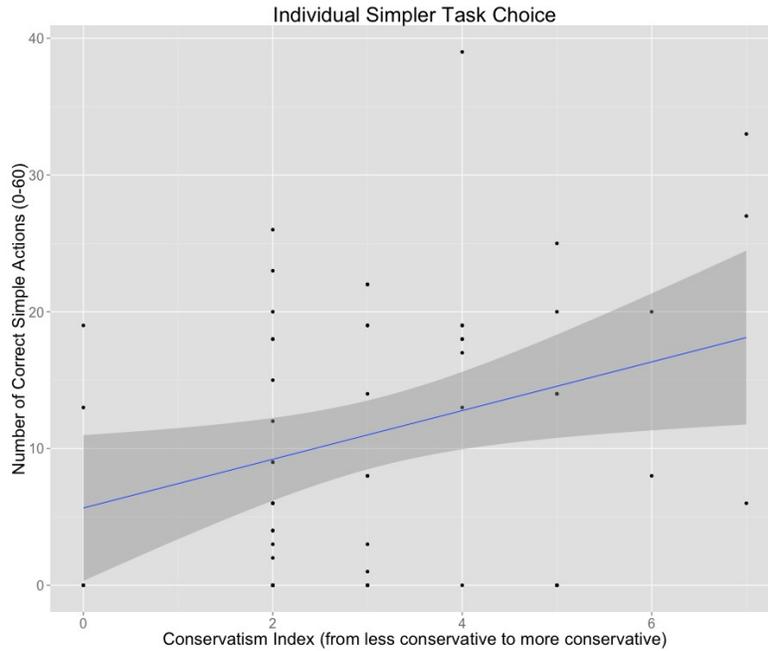Table 2 shows the Ordinary Least Square Regression models that help us to better

Figure 7

quantify these relationships. In all models we have the regression of performance on the independent variables—individual performance in the models in columns 1 and 2, and group performance in columns 3 and 4. The dependent variable is the total number of points the subject made in the task. In column 1 we see that when the Conservatism Index is higher by one point the individual performance is higher by 2.119 points, on average. This coefficient is significant at a *p-value* of 0.001. Column 2 shows the coefficients for the model including the control variables. The coefficient for conservatism increases and remains statistically significant at a 0.001 per cent level. The coefficients for the control variables are not statistically significant. In column 3 we see the coefficient of the regression of group performance on Ideology. On average, an individual leaning to the right of the ideological spectrum is expected to score 8.009 more points than an individual leaning toward the left side of the spectrum. This coefficient is statistically significant with *p-value* of 0.001. The model in column
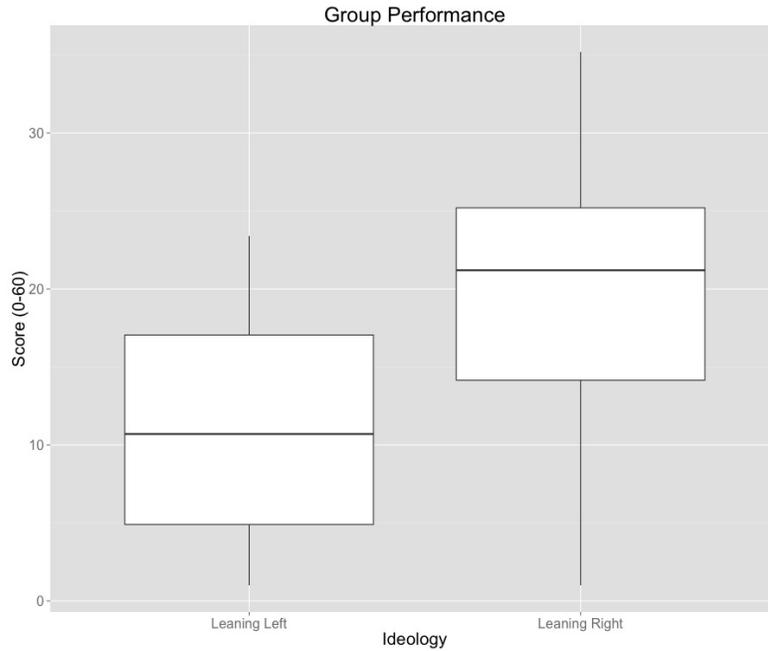
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Figure 8

4 shows that the control variables are not statistically significant. However, the coefficient of Ideology is. Our findings are robust to different cut-points in aggregating ideological groups.

DISCUSSION

Studies 1 and 2 are consistent with the idea that liberals and conservatives show different brain processes, even with regard to non-ideological issues. We found that liberals perform better on a non-standard *Go/No-Go* task. Amodio et al. (2007) found that disinhibition is an issue in neurocognitive correlates of liberalism and conservatism. However, Study 1's non-standard *Go/No-Go* task, and the results obtained, support the realization that even when there is not a disinhibition issue— disinhibition is crucial on standard *Go/No-Go* tasks—, conservatives perform worse. Therefore, we have not only a replication of the findings in Amodio et al. (2007),

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Table 2: *OLS Regression of Performance on Ideology*

	Dependent variable:			
	Score			
	(1)	(2)	(3)	(4)
Conservatism Index	2.119***	2.342***		
	(0.694)	(0.719)		
Ideology (binary)			8.009***	8.887***
			(2.364)	(2.453)
Gamer (binary)		2.757		2.571
		(2.653)		(2.582)
Right-Handedness		1.195		2.076
		(3.556)		(3.504)
Anxious (binary)		−2.673		−2.940
		(2.545)		(2.494)
Constant	9.094***	11.675	11.291***	15.091 ˙
	(2.453)	(8.851)	(1.740)	(8.546)
Observations	48	48	48	48
R^2	0.169	0.207	0.200	0.242
Adjusted R^2	0.151	0.133	0.182	0.172

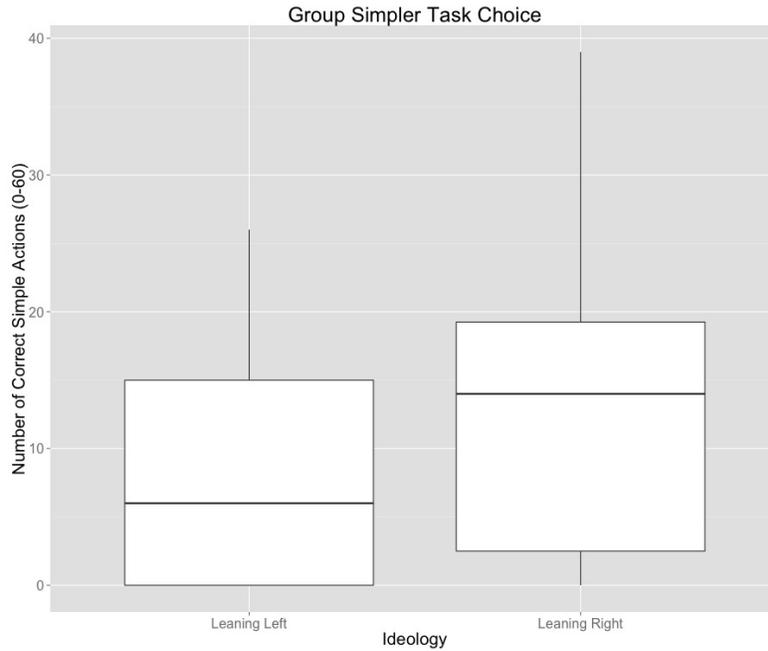*Note:* ˙p<0.1; *p<0.05; **p<0.01; ***p<0.001

Figure 9

but a strengthening of the results. On the other hand, conservatives outperformed liberals in a task in which the simpler action was the optimal one. The expectation was that conservatives would outperform liberals when the task made the action requiring less cognitive flexibility more rewarding. Conservatives opted for the simple action more frequently. Possibly, this more frequent choice might be caused by an ability to acknowledge earlier than liberals that the complex task is too hard. That second finding of ours advances, for example, the findings in Shook and Fazio (2009). In their article, the authors show that liberals and conservatives might have different approaches to a non-ideological task, and learn different things at the end. In our paper, we show that different approaches can result in different overall performances. There are environments—even not political—in which the different cognitive styles of conservatives and liberals alternate as the most payoff maximizing one. As such, this study is the first of its kind to present the actual behavioral data—errors committed,

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response time, and overall performance—of liberals and conservatives, associated with the execution of a fast stimulus-response non-ideological cognitive task.

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