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Abstract

In this paper, we analyze the role of intuitive versus deliberative thinking in stag hunt games. To do so we, first, provide a conceptual framework predicting that, under the assumption that stag is the ruling social convention in real life interactions, players who make their choices fast and intuitively, relying on social heuristics, choose stag more often than other players. Second, we run a lab experiment and use a time pressure treatment to induce fast and intuitive thinking. We find that: (i) players under the time pressure treatment are more likely to choose stag than individuals in the control group; (ii) individual choices under the time pressure treatment are less sensitive to the size of the basin of attraction of stag; (iii) these results are largely driven by less experienced participants. Overall, our findings provide support to the Social Heuristics Hypothesis (Rand et al., 2012) applied to stag hunt interactions.

JEL-Codes: C910, D010.

Keywords: social heuristics hypothesis, stag hunt, intuition, deliberation, lab experiments.

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1 Introduction

According to the so called Social Heuristics Hypothesis (SHH, hereafter), proposed by Rand et al. (2012, 2014), intuitive thinking relies on heuristics shaped by daily-life experience, which allow fast decisions to be taken. In particular, intuitive thinking favors the adoption of the strategies that have resulted, on average, most advantageous in daily-life social interactions, i.e., that maximized average payoff over a sufficiently long period of interaction. By contrast, deliberative thinking occurs when individuals resist the impulse to rely on social heuristics and reflect more deeply upon their current situation, choosing the payoff maximizing strategy case-by-case. So, deliberative thinking is typically slower than intuitive thinking.

Most experimental studies on the SHH have focused on one specific social dilemma, the prisoner dilemma (or the public good game), where defection is a strictly dominant strategy for selfish individuals (see Rand, 2016, for a review).[1] The SHH predicts that, if cooperation pays more than defection in daily-life prisoner dilemmas, then individuals relying on fast and intuitive thinking cooperate more than those relying on slow and deliberative thinking, even in one-shot games. In particular, intuitive behavior can foster cooperation in the lab because, by relying on such mode of reasoning, individuals fail to recognize that the game they are playing is actually one-shot (Bear and Rand, 2016).

In this paper, we consider another important social dilemma which has so far received little attention by the literature on the SHH: the stag hunt game (Skyrms, 2004). In this game, the opposition between coordination on *stag* and coordination on *hare* is a parable for social situations in which coordination can be pursued on two different levels: coordinating on better rewarding but necessarily collaborative actions and coordinating on less rewarding actions which do not require collaboration. Importantly, while in the one-shot prisoner dilemma there is only one Nash equilibrium in dominant strategies (always *defect*), in the one-shot stag hunt game there are two Nash equilibria: one where all the players play *stag* and one where all play *hare*. So, in the typical stag hunt game, an individual's choice between *stag* and *hare* depends on what is the expected play by the opponent. Coordinated play on either action can be interpreted as a social convention (Young, 1996; Lewis, 2008).

[1]The recent debate on the intuitive roots of cooperative and selfish behaviors also covers experimental contributions on ultimatum and dictator games (see, e.g., Achtziger et al., 2016; Lohse, 2016, and references therein), but these studies do not represent a direct test of the SHH as such.

Which kind of behavior is induced by fast and intuitive thinking in a strategic situation that resembles the stag hunt game?[2] The SHH suggests an answer: the ruling convention in the social environment where the individual typically operates. Indeed, a simple and effective social heuristics consists in the rule “conform to the current social convention”, as this typically guarantees the largest payoff. So, if *stag* is the ruling convention in real life interactions, then thinking intuitively should lead to choosing *stag*. In Subsection 2.1 we argue that there are good reasons to believe that *stag* is the ruling convention for stag hunt interactions.

Which kind of behavior is induced by slow and deliberative thinking in stag hunt games? The SHH here provides a less clear guidance. Indeed, deeper reflection helps individuals to make full use of subjective priors regarding the strategic situation they currently face, and such beliefs are likely to be affected by the ruling social convention. Nevertheless, deliberative thinking can well result in the formation of posteriors that induce to behave against the ruling convention. This is the case for those individuals who have a very strong prior belief that their current opponents in the stag hunt game will play against the ruling social convention.

Before detailing our contribution, let us provide a necessary clarification on the use of the terms “intuitive” and “deliberative” in this paper. As noted by Evans (2008), there exist different theories of dual process cognition which identify and impute different attributes to intuition and deliberation (see also the discussions in Kahneman, 2003; Evans and Stanovich, 2013). A large body of literature relates intuition to automatic and unconscious processes that occur extremely fast, possibly in less than a second (Strack and Deutsch, 2004). Several contributions on the relationship between pro-social behavior and ego depletion (Xu et al., 2012; Halali et al., 2013; Achtziger et al., 2015, 2016; Duffy and Smith, 2014) or cognitive load (Cappelletti et al., 2011; Schulz et al., 2014) take this perspective. Other contributions

[2]There are social interactions that fit the stag hunt game by their own nature. There are, moreover, other kinds of interactions that can resemble a stag hunt game, although they apparently have different nature. The problem of social coordination here arises in an extended setting because of some additional characteristics of the game (e.g., reputation effects) or the type of interaction involved (e.g., repeated interaction) that, once taken into account, generate a reduced-form game of the stag hunt type. As an example, consider a prisoner dilemma, where besides the standard Nash equilibrium in which *defection* is played, also the act of *cooperation* by all the players can be enforceable as an equilibrium if players care about their reputation or fear to be sanctioned by the other players participating in the interaction (or by third-party actors and institutions).

define intuition as a mode of reasoning that is not fully unconscious and automatic, but entails also some reflection in the form of heuristics (Rand et al., 2014; Stromland et al., 2016; Cappelen et al., 2016); here, intuition is substantially slower than in the previous approach.[3] We follow the latter interpretation since our aim is to study the tension between reliance on social heuristics and engagement in accurate cost-benefit analysis. To make this clear, we label the two modes of reasoning *intuitive thinking* and *deliberative thinking*.[4]

Our contribution to the literature on the SHH is twofold. On the theoretical side, we adapt and extend the SHH to strategic situations that entail social coordination, like the stag hunt game. We argue that the SHH offers three testable implications in such a setting. First, giving shorter time for decision-making leads to more frequent play of *stag*, if the time given is not too short to prevent thinking at all. Indeed, individuals using social heuristics play according to the ruling social convention, which we presume to be *stag* in real life (as shown in Subsection 2.1). Second, since deliberative thinking makes choices sensitive to the size of the basin of attraction of *stag* in the lab game, while intuitive thinking does not, giving a shorter time for decision-making reduces the sensitivity of choices to changes in such basin of attraction. Third, since greater familiarity with the choice environment makes deliberative thinking faster, giving shorter time for decision-making produces smaller effects (potentially none) on individuals who are more familiar with lab games or with game theory.

On the empirical side, we run a fully incentivized lab experiment designed to test the validity of our adaptation of the SHH to stag hunt interactions, obtaining results that are largely consistent with the predictions described above. In our experimental design, some individuals are induced to rely on the social heuristics by means of a time pressure treatment, i.e., they have a limited number of seconds to take their decisions. Since Wright (1974), a large number of studies has documented that time pressure affects information processing and

[3]Different definitions of intuition can in part explain opposing results in the analysis of intuitive behavior and pro-sociality. Indeed, while some researchers contend that intuition induces cooperative behaviors, while reflection induces selfishness (Rubinstein, 2007; Rand et al., 2012; Stromland et al., 2016; Kieslich and Hilbig, 2014), others argue that deliberation and reflection act as a hurdle to selfish impulses and lead to pro-sociality and cooperation (Achtziger et al., 2016; Lohse, 2016; Capraro and Cococcioni, 2016); finally some studies find no effect of intuition on cooperation (Tinghög et al., 2013; Verkoeijen and Bouwmeester, 2014). See also the discussions in Alós-Ferrer and Strack (2014); Zaki and Mitchell (2013); Weber and Johnson (2009).

[4]Our approach is not different, at least in spirit, to what recently proposed by Rubinstein (2016), where both instinctive and contemplative decision-making involve conscious reasoning and require a minimum amount of time and reflection.

individual behavior in both natural and experimental settings (Evans and Curtis-Holmes, 2005; Roberts and Newton, 2001). Our data suggest that: first, individuals under the time pressure treatment are more likely to play *stag* than those in the control group; second, while the fraction of *stag*-hunters increases as the size of the basin of attraction of *stag* gets larger for both treatments, it does so less markedly under time pressure; third, the effect of time pressure on choice largely depends on behavior by less experienced individuals and is greater for those who better understand the payoff structure of the game.

The empirical findings described above also contribute to the literature on the long run selection between a payoff-dominant convention and a risk-dominant one (Kandori et al., 1993; Young, 1993). On the one side, our experimental evidence supports the idea that the payoff-dominant convention is often selected in the long run, since it must be the ruling convention in order to be encoded in social heuristics. This, in turn, suggests that daily-life interactions are of the kinds that work in favor of the emergence of the payoff-dominant convention (Oechssler, 1997; Ely, 2002; Bhaskar and Vega-Redondo, 2004; Goyal and Vega-Redondo, 2005; Alós-Ferrer and Weidenholzer, 2006; Staudigl and Weidenholzer, 2014).[5] On the other side, our evidence also suggests that intuitive thinking itself might affect the selection of the convention. This would configure a situation where the long-run convention co-evolves with the mode of reasoning (as done by Bear and Rand, 2016, for the case of cooperation).

The structure of the paper is as follows. In Section 2, we present a conceptual framework where we first introduce a number of assumptions adapting the SHH to stag hunt games (Subsection 2.1) and then discuss their testable implications (Subsection 2.2). In Section 3, we illustrate the experimental design (Subsection 3.1) and offer some descriptive evidence (Subsection 3.2). In Section 4, we conduct the econometric analysis of the experimental data, starting with the description of the empirical model (Subsection 4.1) and then describing the main results (Subsection 4.2), the robustness analysis (Subsection 4.3), and the exploration of alternative interpretations (4.4). Section 5 contains a concluding discussion.

[5]The risk-dominant convention, typically associated with *hare*, has been shown to be selected in the long run in a variety of cases that typically involve global interactions (see, e.g., Blume, 1993; Van Damme and Weibull, 2002).

	Hare	*Stag*
Hare	h	h
Stag	c	s

Figure 1: A symmetric stag hunt game, where s is the payoff of coordinating on *stag*, while h is the payoff that can be secured by playing *hare*, with $2h > s + c$ and $s > h$.

2 Conceptual framework

2.1 Assumptions

To model the behavioral consequences of intuitive and deliberative thinking in a stag hunt game, we propose an adaptation of the so-called Social Heuristics Hypothesis (SHH) (Rand et al., 2012, 2014) to a setup of pure social coordination. We choose to provide a minimal set of assumptions to rationalize behavior, without taking unnecessary stances on the actual working of the decision-making process.[6]

Figure 1 describes the stag hunt game considered in the paper. We assume that $s > h$, where s is the payoff of coordinating on the action *stag* and h is the payoff secured by playing the action *hare*, and also that $2h > s + c$, where c is the payoff to an individual playing *stag* when her/his opponent plays *hare*. From these two assumptions it follows that choosing *hare* is risk-dominant; while, playing *stag* is payoff-dominant.

We now introduce the main assumptions to model intuitive and deliberative thinking. As regards intuitive thinking, the SHH predicts that individuals relying on heuristics take the action that has resulted, on average, to be most advantageous in daily-life social interactions. Hence, the specific choice of these individuals strictly depends on what pattern of behavior is expected to be more likely in the society where they live, i.e., the ruling social convention.

[6]With few adjustments, our assumptions can be derived as implications from different decision models, such as endogenous depth of reasoning (Alaoui and Penta, 2017, 2015), evolution of deliberation (Bear and Rand, 2016; Bear et al., 2017), or bounded reasoning about rationality (Friedenberg et al., 2016; Kets, 2017).

Assumption **1** (Intuitive thinking). *Intuitive thinking leads to take the action that is best reply to the believed ruling social convention for such kind of interactions in daily-life.*

By contrast, individuals who rely on deliberative thinking evaluate case-by-case what is believed to be most advantageous in the current context.

Assumption **2** (Deliberative thinking). *Deliberative thinking leads to take the action that is expected to be payoff maximizing in the current environment.*

In order for Assumptions 1 and 2 to predict behavior, we also have to specify, on the one hand, which is the ruling social convention in real situations that resemble a stag hunt game and, on the other hand, the expected beliefs held by a deliberative individual in the current environment.

With respect to the ruling social convention, we argue that there are good reasons to believe that, in modern societies, *stag* is the most likely action to be taken.[7] Social learning provides arguments for this, at least when interactions are reasonably constrained in number and not fully random (Staudigl and Weidenholzer, 2014).[8] Moreover, the payoff-dominant convention is typically selected in the long run when individuals have also to choose a location where to implement their actions (Oechssler, 1997; Ely, 2002; Bhaskar and Vega-Redondo, 2004). Finally, evolutionary arguments suggest that payoff-dominant outcomes at the population level are likely to be selected when group competition is at work. Indeed, in human history, reproduction and struggle for existence have made collaboration among individuals extremely effective (Nowak, 2006; Bowles and Gintis, 2011; Tomasello, 2016).

Assumption **3** (Believed ruling social convention). *The believed ruling social convention for daily-life stag hunt interactions is stag.*

We now come to consider the expected beliefs held by a deliberative individual. Individuals employing deliberative thinking tend to use all the available information that is judged to

[7]A direct measurement of what is the believed ruling social convention as done in Krupka and Weber (2013) or Kimbrough and Vostroknutov (2016) is problematic in our case, because we are interested in measuring the believed daily-life convention, which in our theoretical framework is allowed to be different from what players expect to be the ruling behavior in the lab.

[8]It is well known that, in the long run, coordination occurs on the risk-dominant convention – *hare* in the case of the stag hunt – when interaction is totally random (Goyal and Vega-Redondo, 2005) or totally unconstrained (Kandori et al., 1993; Young, 1996). A mixed outcome can emerge in the presence of strong cultural intolerance (Bilancini and Boncinelli, 2017).

be relevant for the game that they are currently playing: both the specific characteristics of the game (e.g., size of the payoffs, available strategies, basin of attraction, etc.) and the specific characteristics of the current environment (opponent's characteristics, place where the game is played, etc.).

In the light of this, we have to distinguish between situations that occur in daily life and situations that take place in the experimental laboratory, i.e., in a controlled and aseptic environment. For individuals who are called to play a game in a lab, especially for those that are there for the first time, this can be a quite new situation. In the real life, individuals who rely on deliberative thinking are likely to play *stag* because they tend to best reply to the believed ruling social convention. Hence, the outcome of their choices is the same as those by individuals that, relying to intuitive thinking, follow social heuristics.

However, when individuals rely on deliberative thinking and find themselves in a lab situation, they do not necessarily best reply to the believed ruling social convention. They need not necessarily play against it, either. Since the situation is atypical, learning is very limited and, therefore, much depends on individuals' priors on her/his opponent's play, resulting in a substantial degree of heterogeneity in behavior.

Assumption 4 (Beliefs under deliberative thinking). *In stag hunt interactions, deliberative thinking leads to a belief on the opponent's probability to play stag that is a random variable with cumulative distribution F having full support in* $[0, 1]$.

Therefore, given the threshold belief $\tau = (h - c)/(s - c)$ which makes *stag* best reply, the probability that deliberative thinking leads to choose *hare* is given by $F(\tau)$.

So far we have made no reference to the relationship between the response time, i.e., the time employed to take an action, and the mode of reasoning. A large experimental literature suggests that intuitive thinking operates more quickly than deliberative thinking (e.g., Evans and Curtis-Holmes, 2005; Roberts and Newton, 2001; Rubinstein, 2007). So, it seems reasonable to assume that thoughtful reflection requires, on average, both more effort and more time to reach a decision than reliance on social heuristics (Evans and Stanovich, 2013). Even if shorter, however, the time required to take an action under intuitive thinking cannot be too short, otherwise automatic and unconscious processes would govern the decision process (Strack and Deutsch, 2004; Achtziger and Alós-Ferrer, 2013). Moreover, the time amount needed to take an action under deliberative thinking depends on a variety of factors (some of which are situation-specific and others are individual-specific). In particular, we assume that familiarity with the choice environment is a substitute for response time; therefore, individuals who are less familiar with the current choice environment are more sensitive to a reduction of response time. This is consistent with findings by Rand et al. (2014) who use experimental data from previous studies showing that when individuals are forced to respond quickly to a public good game, they tend to cooperate more, on average, but less so when they have experience with one-shot lab experiments (see also Stromland et al., 2016).

ASSUMPTION **5** (Deliberation requires time)**.** *In stag hunt interactions, provided that the time lapse is not too short to prevent thinking at all, the probability to rely on intuitive thinking increases as the available time to make a decision becomes shorter. This effect is the larger, the less familiar the decision-maker is with the current choice environment.*

2.2 Testable implications

Building on Assumptions 1-5, it is straightforward to derive three testable behavioral implications regarding the relation between the time available to take an action and the pattern of individual behavior in a stag hunt game played in a lab. In the statements below, the time available is intended to never be too short to prevent thinking at all.

From Assumptions 1 and 3, we obtain that, in the context under consideration, intuitive thinking leads to choosing *stag*. From Assumptions 2 and 4, we have that deliberative thinking leads to choosing *stag* with a positive probability that is strictly less than one, i.e., $0 < F(\tau) < 1$. Hence, intuitive thinking leads to take the action *stag* more often than deliberative thinking.

From Assumption 5, we obtain that the shorter the time available, the larger the fraction of individuals relying on social heuristics. Wrapping these considerations together, we can write the following behavioral implication:

BEHAVIORAL IMPLICATION **1** (BI1)**.** *In a stag hunt game, the shorter the time available to make a choice, the larger the probability that stag is chosen.*

Moreover, from Assumptions 2 and 4, we have that individuals relying on deliberative thinking are more likely to play *stag* the smaller the threshold τ, i.e., the larger the basin of attraction of *stag*. By Assumption 5, the shorter the time available, the less likely it is that the individual relies on deliberative thinking and, as a consequence, the less sensitive her/his choice is to the relative magnitude of the payoffs of the two actions (since, by Assumptions 1 and 3, intuitive thinking leads to choosing *stag* regardless the size of its basin of attraction). We can summarize this intuition as follows:

Behavioral Implication **2** (BI2)**.** *In a stag hunt game, the shorter the time available to make a choice, the smaller the impact of the size of the basin of attraction of stag on the probability that stag is chosen.*

Finally, recalling that, by Assumption 5, the effect of the time available for making a decision on the probability of engaging in intuitive thinking decreases with the familiarity of the decision-maker with the current environment. Then, in the light of Assumptions 1-4, we can formulate the third behavioral implication that follows:

Behavioral Implication **3** (BI3)**.** *In a stag hunt game, the greater the individual's familiarity with the current choice environment, the smaller the impact of the time available to make a choice on the probability of choosing stag.*

3 The experiment

3.1 Experimental design

In order to test BI1, BI2, and BI3 in the lab, we design an experimental treatment to manipulate the use of intuitive versus deliberative thinking. More precisely, our manipulation relies on the introduction of a time constraint to individuals' decision-making process. The experimental setting is illustrated below.

The experiment was conducted at the CESARE Laboratory of LUISS-Guido Carli and programmed in z-Tree (Fischbacher, 2007). Participants were recruited from a pool of students at LUISS-Guido Carli using ORSEE (Greiner, 2004) with the only restriction of a more or less equal gender balance. The overall number of participants in the experiment is 185, divided in eight sessions.

The participants were all asked to play series of four different one-shot two-player stag hunt games (the same games, but in different order) with a perfect stranger matching protocol and no feedback information. The experimental setting was identical for all the individuals (same lab, same instructions, same instructions reader), but for the different treatments.

Figure 2 reports the payoffs from the four different games, where A stands for *hare* and B for *stag*. Game 1 and Game 2 have the same basin of attraction of *stag*, with Game 2 being the transformation of Game 1 where one point is added to each outcome. Game 3 has the largest basin of attraction of *stag*, while Game 4 has the smallest. In order to make it easier for participants to translate payoffs in monetary units, we set an exchange ratio payoff/euro of 1:1. So, a game payoff of four gave the right to be paid four euro.

GAME 1

Stag attraction basin: 1/4

	A	*B*
A	3	3
B	0	4

GAME 2

Stag attraction basin: 1/4

	A	*B*
A	4	4
B	1	5

GAME 3

Stag attraction basin: 3/8

	A	*B*
A	2.5	2.5
B	0	4

GAME 4

Stag attraction basin: 1/8

	A	*B*
A	3.5	3.5
B	0	4

Figure 2: The four stag hunt games of the experiment with reference to the basin of attraction of *stag*.

Individuals randomly received two different treatments. The first group (control group) had no time limits to response times. Four sessions of this treatment were run, for a total of 97 participants, 51 men and 46 women. The second group (pressure treatment group) was asked to take an action under a time constraint of 10 seconds for each game. Four sessions of this treatment were also run, for a total of 88 participants, 47 men and 41 women.

Table 1 reports summary information on the experiment. In all the sessions, Game 1 was the first to be played, while Game 2, 3, and 4 where played in different orders in the various rounds.

Table 1: Sessions' structure

Session	Treatment	Game order	Daytime	#Individuals	#Women	#Obs.	Timed out
1	Control	1,2,3,4	morning	22	12	88	-
2	Control	1,3,4,2	morning	26	13	104	-
3	Control	1,4,2,3	afternoon	26	10	104	-
4	Control	1,4,3,2	afternoon	23	11	92	-
Total obs. in control				97	46	388	-
5	Time pressure	1,4,3,2	afternoon	18	7	72	10
6	Time pressure	1,2,3,4	morning	21	13	84	6
7	Time pressure	1,3,4,2	morning	25	9	100	7
8	Time pressure	1,4,2,3	afternoon	24	12	96	6
Total obs. in time pressure				88	41	352	29
Total obs.				185	87	740	29

Note: Observations and participants by treatment, session, daytime, game order, and gender. Last column reports the number of individuals who did not manage to make a decision in 10 seconds under the time pressure treatment.

Before playing the four stag hunt games, an example with abstract payoffs was presented to the participants. Both the game and the mechanics of payments were described in the instructions that appeared on the screens and were read in the lab by an experimenter. For details on the instructions see Appendix A.

All the decisions were made individually and there was no interaction among participants in the experiment (except for the determination of the payoffs that took place at the end of the experiment). Participants were not allowed to use any electronic device or to write on paper.

Since the simultaneous start of each of the four games for all the participants would have led some of them to wait until all the others had finished to play the previous game, possibly altering the effect of the time pressure treatment depending on how quickly an individual played previous games, we opted to let players take their actions in all the four games independently of the timing of the opponent and then, when all the participants in a session had made all the four decisions, pairs were formed and payoffs calculated.

When all the participants of a given session had finished to play the four games, a series of questionnaires was administered to them in order to collect information regarding their individual characteristics, aspects of their life, and their way of reasoning.

No feedback information was provided to participants during the play of the four games. After all the decisions were taken and matches determined, participants were told their total payoffs. Participants were paid an amount of euro equal to the game payoff plus two euro of show up fee. Average total payoff was 11.24 (the average payoff per game was 2.81) for a session that lasted around 45 minutes.

3.2 Descriptive evidence

Table 2 reports the summary statistics describing our sample, comparing the control group with the time pressure treatment group. The means and t-tests in the table document that the two sub-samples are balanced under some relevant respects, such as gender, family background, age, education, experience in game theory and applications.

We now come to the effects of our treatment. As explained above, the design of the time constraint is aimed to force individuals to respond quickly when playing the game. Figures 3 and 4 show that the treatment worked. The time lapse spent by participants to make a decision varied considerably between groups, both when we consider all the games and when we look at games one-by-one. In the first case (Figure 3), the overall average time spent to make a decision was equal to 16 seconds under the control and to eight seconds under the time constraint treatment. The difference between these two numbers is statistically significant at the 1% level. This result also holds when we compute the average time for each game separately considered (Figure 4)

Figure 5 shows the average fractions of individuals choosing *stag*, computed by treatment group. The fraction of *stag*-hunters in the control group was equal to 52%, while that in the time pressure group was 63%, the two differing at least at the 5% level of statistical significance. This figure offers a first piece of evidence documenting that participants under time constraint chose *stag* more often, according to our prior summarized by BI1.

Figure 6 delivers a further important piece of information: it reports the fraction of individuals choosing *stag*, distinguishing by the size of the basin of attraction of *stag* in the various games. In particular, it shows that 68% of participants played *stag* in Game 3, in which the size of the basin of attraction of *stag* is equal to 3/8; 58% of players chose *stag* in

Table 2: Descriptive statistics

Variable	Min	Max	Mean		P−value
			Control	Time press	diff = 0
Female	0	1	0.4742	0.4659	0.9105
			(0.0510)	(0.0535)	
Mother education	1	3	2.4742	2.4659	0.9228
			(0.0588)	(0.0625)	
Father education	1	3	2.4742	2.3636	0.2530
			(0.0623)	(0.0744)	
Age	20	26	22.2474	22.6250	0.2868
			(0.2317)	(0.2691)	
Graduate	0	1	0.4948	0.5682	0.3209
			(0.0510)	(0.0531)	
No game theory	0	1	0.5670	0.5227	0.5483
			(0.0506)	(0.0536)	
No lab experience	0	1	0.7629	0.7386	0.7050
			(0.0434)	(0.0471)	

Note: *Female*=1 if the individual is a female and =0 otherwise; *mother educ* is the education of her/his mother (= 1 if middle school diploma ('licenza media') or lower, = 2 if high school diploma ('maturitá'), = 3 if graduation ('laurea')); *father educ* is the education of her/his father (as before); *age* is age; *graduate*=1 if the individual is enrolled in master studies ('magistrale') and =0 if in undergrad studies ('triennale'); *no game theory*=1 if the individual has not taken game theory courses and =0 otherwise; *no lab experience*=1 if she/he has not taken part in previous lab experiments and =0 otherwise. The last column shows the p-value for the test that the corresponding means in the control and time pressure groups are equal (null hp.).

Games 1 and 2, which have the same basin of attraction of *stag* equal to 1/4; and, finally, only 42% of individuals opted for *stag* rather than for *hare* in Game 4, in which the size of this basin is 1/8. The difference between the first two numbers (Game 3 and Games 1 and 2) is not statistically significant at the 5% level, but the difference between the first and the third number (Game 3 versus 4) and that between the second and the third (Games 1 and 2 versus 4) are both statistically significant at the 5% level. Although these rough comparisons must be cleaned from possible confounding factors (that will be properly taken into account in the regression analysis below), they suggest that as the basin of attraction

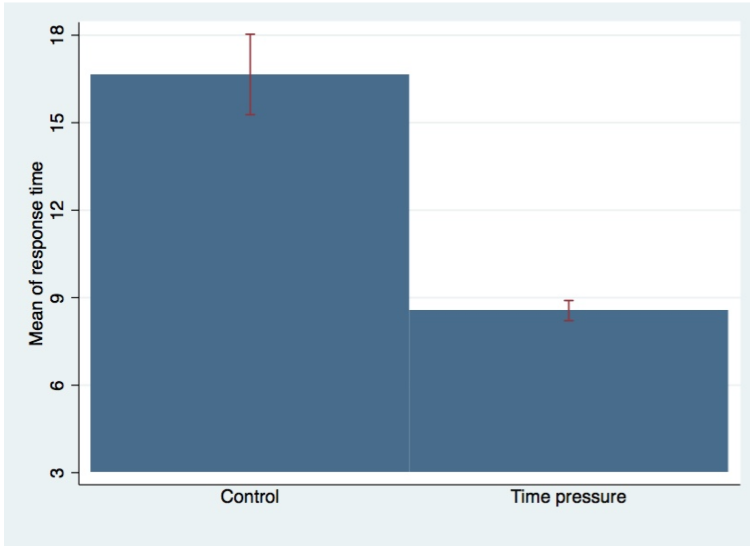

Figure 3: Average time, in control and time pressure treatments.

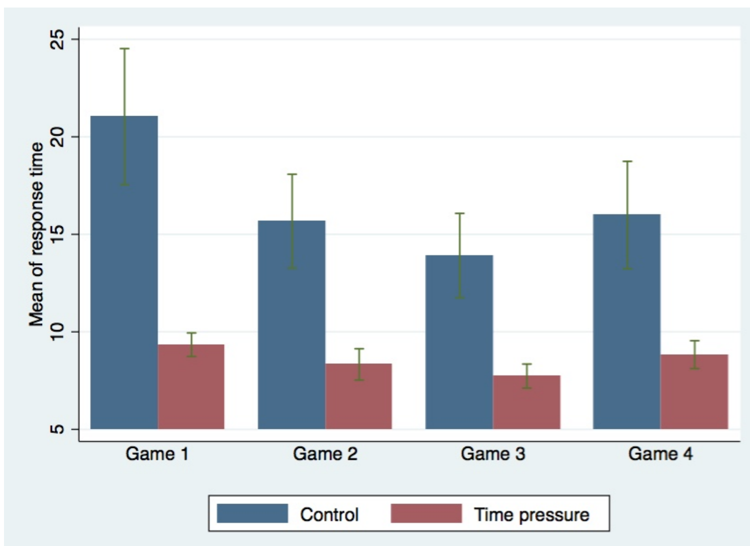

Figure 4: Average time, in control and time pressure treatments, by game.

of *stag* decreases, the fraction of *stag*-hunters decreases, as suggested by BI2.

Figure 7 shows the fraction of individuals choosing *stag*, distinguishing by both treatment and size of the basin of attraction. From it we can see that, for each size of the basin of attraction, individuals played more *stag* under the time pressure treatment than under the control. However, the difference between the fraction of *stag*-hunters and that of *hare*-hunters increased when the basin of attraction got larger (when going from 3/8 to 1/4 and,

Figure 5: Average play of *stag*, in control and time pressure treatments.

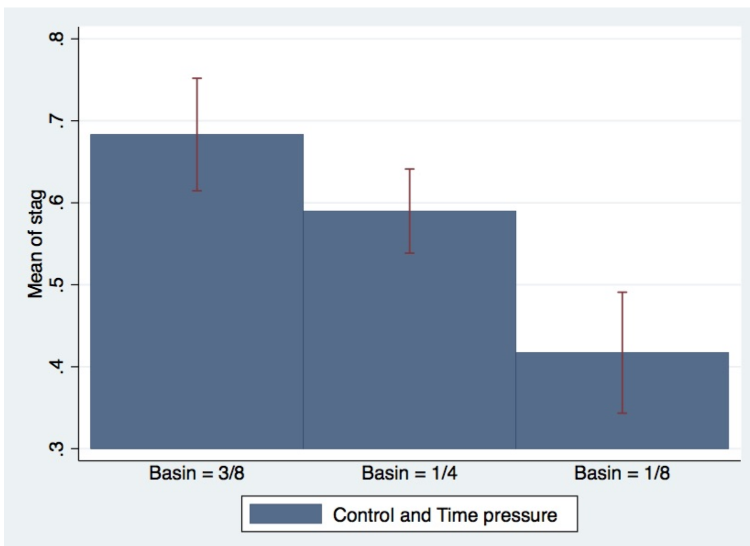

Figure 6: Average play of *stag* by size of the basin of attraction of *stag*.

remarkably, from 1/4 and 1/8).

Figure 8 reports some evidence consistent with BI 3. We consider previous experience with lab experiments or game theory as a proxy for familiarity with the choice environment. The figure shows that, among the individuals who had some experience with lab experiments or game theory (either participated in a lab experiment or attended a course in game theory or both), the fractions of participants who played *stag* under the time pressure and under the control treatment were not statistically different. By contrast, among inexperienced individuals (did not participate in lab experiments and did not attend courses in game theory) the fraction of those that played *stag* under the time pressure treatment is larger than the fraction of those that chose the same action under the control, and the difference between the two is statistically different at least at the 5% level. This finding suggests that

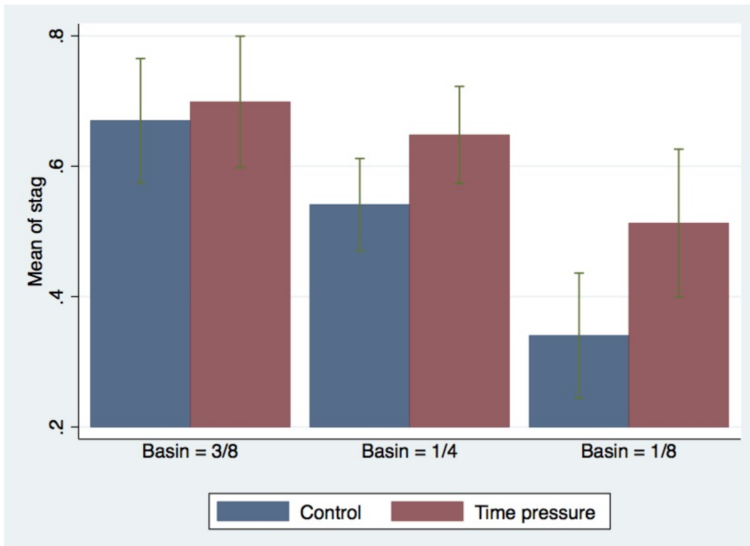

Figure 7: Average play of *stag* by treatment and size of the basin of attraction of *stag*.

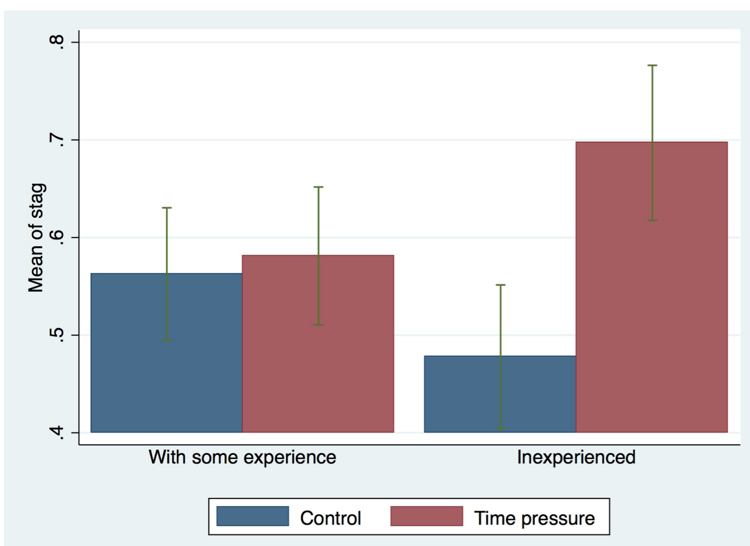

Figure 8: Average play of *stag* by treatment and level of experience with lab experiments and game theory.

the time constraint had an effective impact on decisions of individuals who had never played in an experimental lab and did not have knowledge of game theory, but was ineffective on those that had at least one of these two characteristics.

Table 3: Expected payoffs conditional on actual play by game and treatment.

Fraction of individuals playing *stag*				
Game	in control	in time pressure	Overall	
1	61.86	66.25	63.84	
2	46.39	63.41	54.19	
3	67.01	69.88	68.33	
4	34.02	51.28	41.71	
	Expected payoff of *stag*			Payoff of *hare*
Game	in control	in time pressure	Overall	
1	2.47	2.65	2.55	3
2	2.86	3.54	3.17	4
3	2.68	2.80	2.73	2.5
4	1.36	2.05	1.67	3.5

Note: Average total payoff was 11.24; average payoff per game was 2.81.

Finally, Table 3 reports average payoffs computed on actual play, by type of game. It shows, in particular, that playing *hare* gave a higher payoff than playing *stag* in all the games except in Game 3, which is that associated with the largest basin of attraction of *stag*.

4 Regression analysis

4.1 Empirical model and variables' description

We estimate the following regression model:

$$\begin{aligned} stag_{it} = {} & \alpha_s + \alpha_d + \alpha_t + \beta \times pressure_{it} + \\ & + \gamma_1 \times basin_g + \gamma_2 \times basin_g \times pressure_{it} + \\ & + \gamma_3 \times inexperience_i + \gamma_4 \times inexperience_i \times pressure_{it} \times + \\ & (+\boldsymbol{\delta} \times \mathbf{controls}_i + \boldsymbol{\eta} \times \mathbf{test}_i + \boldsymbol{\theta} \times \mathbf{personality}_i) + \epsilon_{it}, \end{aligned} \tag{1}$$

where $stag_{it} = 1$ if individual i chose *stag* in round t and $= 0$ otherwise; $pressure_{it} = 1$ if individual i was under the time pressure treatment in round t and $= 0$ otherwise; $basin_g$ is the basin of attraction of *stag* in game g; α_s, α_d, and α_t are, respectively, session, day, and round fixed effects; $inexperience_i = 2$ if individual i had no lab experience and did not take game theory courses, $= 1$ if the individual satisfies one of the two conditions, and $= 0$ if none; ϵ_{it} are the residuals. Standard errors are always clustered at the individual level. Bold denotes vectors.

The vector $\mathbf{controls}_i$ includes a set of variables measuring individual personal characteristics and, namely: $female_i = 1$ if individual i is a female and $= 0$ otherwise; $graduate_i = 1$ if individual i is enrolled in master studies ('magistrale') and $= 0$ if enrolled in undergrad studies ('triennale'); $father_i$ and $mother_i$ are respectively father and mother education levels and are $= 1$ if middle school diploma ('licenza media') or lower, $= 2$ if high school diploma ('maturitá'), $= 3$ if graduation ('laurea').

The vector $\mathbf{test}_i$ is composed of two variables capturing the level of individual comprehension of the game measured by responses to the following questions: (i) "If the opponent plays B, which is the best choice you could make?" (ii) "If the opponent plays with 50% of probability A and with 50% of probability B, which is, on average, the best choice you could make?". We then construct two variables: $test1_i = 1$ if individual i responded correctly to question (i) and $= 0$ otherwise; $test2_i = 1$ if individual i responded correctly to question (ii) and $= 0$ otherwise.

Finally, the vector $\mathbf{personality}_i$ comprises a number of variables capturing participants' responses to a series of questionnaires about relevant characteristics of their personality. The first series of questions is aimed at measuring the participant's trust in other people, $trust_i$, and her/his willingness to take risks (in different domains such as in financial investments, sports and leisure, work, health, and social relations), $risklove_i$. Both these indexes vary from 0 (respectively, non trustful and risk averse) to 7 (trustful and risk lover).

The second questionnaire is the Cognitive Reflection Test (CRT) and assesses a person's tendency to override an initial "gut" response to use further reflection and look for the proper answer to a question or situation to face. Here, we have two variables constructed on the basis of how a participant responded to three simple problems that have an "apparently" intuitive but incorrect answer): $CRT01_i = 1$ when individual i responded correctly to at least one out of the three questions, and $= 0$ otherwise; $CRT02_i = 1$ when the individual responded correctly to at least two out of the three questions, and $= 0$ otherwise.

The third set of questions is the Rational Experiential Inventory (REI-40) which offers the following variables: $rability_i$ is rational ability that measures perceived ability to use logical and analytic thinking ("I have a logical mind"); $rengagement_i$ is rational engagement that captures the perceived reliance on and enjoyment of using logical and analytic thinking ("I enjoy intellectual challenges"); $eability_i$ is experiential ability that gauges the perceived ability with respect to one's intuitive impressions and feelings ("I believe in trusting my hunches"); $eengagement_i$ is experiential engagement that measures perceived reliance on and enjoyment of using feelings and intuitions ("I tend to use my heart as a guide for my actions"). Each of these variables goes from 1 to 5.

The last questionnaires is to measure the Personality Big Five characteristics (Digman, 1990) and, namely, such as extraversion ($extraversion_i$), agreeableness ($agreeableness_i$), self-consciousness ($conscientiousness_i$), emotional stability ($emotionalstability_i$), and openness to experiences ($openness_i$). The range of these variables is from 1 to 5. We employ the TIPI (Ten Items Personality Inventory) as provided by Gosling et al. (2003, 2014).

4.2 Main results

In this section, we describe and discuss our results from OLS estimation. Probit estimation results are reported in Appendix B (Tables B1-B6).

Table 4 shows our main results, which test the three behavioral implications reported in Section 2.2. In the estimation, the number of observations drops from 740 (185×4) to 711 because 29 choices were not taken in the 10 seconds under the time pressure treatment.[9]

Columns (1) through (4) investigate the empirical relevance of BE1. When the only independent variable is $pressure_{it}$ and fixed effects are not included (column (1)), the effect of the time constraint is positive and statistically significant at any conventional level. This implies that being under time pressure increases the probability of playing *stag* by about 10 percentage points. Such positive effect is confirmed when we also include the three sets of

[9]Since observations for which individuals did not make a choice within time lapse imposed by the treatment are somehow censored, as a robustness check we also verify that our main results are not driven by their exclusion from the estimation sample. Since we could not register these 29 potential responses, we run the following robustness check reported in Appendix B. In a first stage, we predict the censored responses by a probit model that includes all the relevant variables collected for our individuals and, then, estimate our main regressions by using as dependent variable our actual response variable where the 29 missing observations are filled by the values predicted in the first stage. As one would notice, results, shown in Tables C7 and C8, are in line with those reported in Table 4 and all the model's predictions are confirmed.

Table 4: Main results - OLS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
pressure	0.1053**	0.0996**	0.1025**	0.1020**	0.0445		
	(0.0525)	(0.0505)	(0.0507)	(0.0505)	(0.1467)		
basin				1.0847***	1.3448***	0.6740***	1.4122***
				(0.1657)	(0.2095)	(0.2467)	(0.2139)
basin×pressure					-0.5778*		
					(0.3136)		
inexperience				0.0217	-0.0535	0.0990*	-0.0706
				(0.0399)	(0.0571)	(0.0544)	(0.0578)
inexp×press					0.1552*		
					(0.0801)		
Observations	711	711	711	711	711	323	388
R-sq	0.011	0.067	0.078	0.114	0.127	0.053	0.188
Treatment	All	All	All	All	All	Pressure	Control
Day Fe	No	Yes	Yes	Yes	Yes	Yes	Yes
Session Fe	No	Yes	Yes	Yes	Yes	Yes	Yes
Round Fe	No	Yes	Yes	Yes	Yes	Yes	Yes
Individual controls	No	No	Yes	Yes	Yes	Yes	Yes

Note: The dependent variable is $stag_{it}$=1 if individual i chose *stag* in round t and =0 otherwise. The coefficient on the linear combination of the coefficients on $pressure_{it}$, $basin_g \times pressure_{it}$ and $inexperience_i \times pressure_{it}$ computed at the means of the variables (0.25 for $basin_g$ and 1.3 for $inexperience_i$) is equal to 0.1018** (s.e.=0.0506). The test for the difference between the coefficients on $basin_g$ in columns (6) and (7) gives t-stat=5.33 (p-value=0.0210); that between the coefficients on $inexperience_i$ gives t-stat=4.75 (p-value=0.0293). Standard errors (in parentheses) are always clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

fixed effects, day, session, and round (column (2)), and in addition the individual controls (column (3)). Column (4) reports our output when we include among the regressions the variable $basin_g$, which captures the size of the basin of attraction of *stag* in the various games, and the variable $inexperience_i$, which captures the level of individual inexperience with game theory and lab experiments. While the size and statistical significance of the parameter on $pressure_{it}$ remain similar to those reported in the previous columns, the parameter on $basin_g$ turns out positive and statistically significant at any conventional level. This suggests that the larger the basin of attraction of *stag*, the larger the set of beliefs that justifies the choice of *stag* and, as a consequence, the more likely that an individual takes this action. Instead, the estimated coefficient on $inexperience_i$ turns out not statistically significant, hinting that participants' experience *per se* has no impact on the individual's choice between *stag* and *hare*.

Column (5) shows our results testing BE2 and BE3: the estimated coefficients on the interaction between $basin_g$ and $pressure_{it}$ and between $inexperience_i$ and $pressure_{it}$, respectively. Interestingly, while the size of the basin of attraction still exerts a positive and statistically significant effect on the probability of choosing *stag*, the estimated coefficient on the interaction between $basin_g$ and $pressure_{it}$ is negative and statistically significant at least at the 10% level, meaning that the effect of the size of the basin of attraction has a smaller impact when an individual is under time pressure. Lastly, the coefficient of $pressure_{it}$ becomes smaller and not statistically different from zero. This suggests that the effect of the time constraint works entirely through the the interacted variables: indeed, the linear combination of the coefficients on $pressure_{it}$, on the interaction between $basin_g$ and $pressure_{it}$, and on the interaction between $pressure_{it}$ and $inexperience_i$, computed at the mean values of the variables, is positive and statistically significant at least at the 5% level (the average of $basin_g$ is 0.25, the average of $inexperience_i$ is 1.3).

Finally, in columns (6) and (7), we show that, when we split the sample by treatment group (time pressure versus control), the effect of the size of the basin of attraction of *stag* is positive in both but larger in the control group. The difference between the two coefficients is statistically significant at least at the 5% level, meaning that individuals who were imposed no time limits to make their decisions were more sensitive to the specific characteristics of the game at hand. Instead, the estimated impact of inexperience is positive, and statistically significant, in the treated group and negative, and not statistically significant, in the control group. Again, the difference between the two coefficients is statistically significant. This suggests once again that the past individual experience is not important *per se*, but has the effect of limiting the effectiveness of the treatment.

4.3 Additional results and robustness analysis

The comprehension of how the games work could also be an important driver of our results. Table 5 reports our econometric output after including in our regression model the two additional controls $test1_i$ and $test2_i$, the first checking whether or not an individual understood that playing *stag* is the payoff dominant strategy, the second verifying the participant's

Table 5: Game comprehension - OLS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
pressure	0.0445	0.0418	0.0385	-0.0540	-0.2719	-0.0498	-0.3341
	(0.1467)	(0.1484)	(0.1630)	(0.1470)	(0.1925)	(0.1470)	(0.2112)
basin	1.3448***	1.3448***	1.3364***	1.3398***	1.3313***	1.3398***	1.3158***
	(0.2095)	(0.2097)	(0.2224)	(0.2102)	(0.2392)	(0.2103)	(0.2478)
basin×pressure	-0.5778*	-0.5775*	-0.6442*	-0.5328*	-0.4512	-0.5330*	-0.3244
	(0.3136)	(0.3142)	(0.3331)	(0.3149)	(0.4230)	(0.3149)	(0.4359)
inexperience	-0.0535	-0.0535	-0.0733	-0.0532	-0.1179*	-0.0533	-0.1301*
	(0.0571)	(0.0570)	(0.0600)	(0.0550)	(0.0640)	(0.0553)	(0.0698)
inexp×press	0.1552*	0.1570*	0.1931**	0.1929**	0.3297***	0.1898**	0.3631***
	(0.0801)	(0.0810)	(0.0892)	(0.0774)	(0.1151)	(0.0776)	(0.1259)
test1		-0.0135				0.0269	
		(0.0737)				(0.0683)	
test2				-0.2178***		-0.2202***	
				(0.0534)		(0.0536)	
Observations	711	711	631	711	468	711	433
R-sq	0.127	0.127	0.140	0.164	0.161	0.164	0.171
Treatment	All	All	Stag Ok	All	Hare Ok	All	Both Ok
Day Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Session Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Round Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: The dependent variable is $stag_{it}$=1 if individual i chose *stag* in round t and =0 otherwise. Standard errors (in parentheses) are always clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

understanding of the fact that playing *hare* is risk dominant.

As shown in columns (2) and (3) (column (1) reports our main results, from column (5) of Table 4, for the sake of comparison), the fact that an individual did or did not understand correctly the first issue does not affect our previous findings (in column (2) we include the variable $test1_i$, while in column (3) we restrict our sample to the group of participants that responded correctly to the first comprehension question). In column (4), we show our results when $test2_i$ is included as a control. The effect of this additional variable is negative and statistically significant at the 1% level, suggesting that the fact that participants understood the insurance role of the action *hare* reduces their probability to play *stag* in a statistically significant way. This conclusion is confirmed when we restrict our sample to the group of

Table 6: Trust and Risk love - OLS

	(1)	(2)	(3)	(4)	(5)	(6)
pressure	0.0445	0.0497	0.1660	0.0537	0.2240	0.2246
	(0.1467)	(0.1461)	(0.2345)	(0.1459)	(0.2954)	(0.2955)
basin	1.3448***	1.3451***	1.3451***	1.3453***	1.3454***	1.3454***
	(0.2095)	(0.2096)	(0.2098)	(0.2096)	(0.2097)	(0.2100)
basin×pressure	-0.5778*	-0.5728*	-0.5741*	-0.5887*	-0.5872*	-0.5850*
	(0.3136)	(0.3138)	(0.3139)	(0.3140)	(0.3141)	(0.3144)
inexperience	-0.0535	-0.0540	-0.0545	-0.0645	-0.0660	-0.0642
	(0.0571)	(0.0556)	(0.0555)	(0.0554)	(0.0554)	(0.0559)
inexperience×pressure	0.1552*	0.1690**	0.1655**	0.1744**	0.1745**	0.1737**
	(0.0801)	(0.0784)	(0.0785)	(0.0790)	(0.0789)	(0.0796)
trust		0.0689***	0.0826**			0.0240
		(0.0248)	(0.0319)			(0.0442)
trust×pressure			-0.0319			-0.0123
			(0.0499)			(0.0686)
risklove				0.1159***	0.1352***	0.1111*
				(0.0343)	(0.0420)	(0.0588)
risklove×pressure					-0.0461	-0.0342
					(0.0698)	(0.0970)
Observations	711	711	711	711	711	711
R-sq	0.127	0.144	0.145	0.152	0.153	0.154
Treatment	All	All	All	All	All	All
Day Fe	Yes	Yes	Yes	Yes	Yes	Yes
Session Fe	Yes	Yes	Yes	Yes	Yes	Yes
Round Fe	Yes	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes

Note: The dependent variable is $stag_{it}$=1 if individual i chose *stag* in round t and =0 otherwise. Standard errors (in parentheses) are always clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

individuals that responded correctly to the second comprehension question, as reported in column (5). Our previous conclusions are confirmed when we include in our regression model both $test1_i$ and $test2_i$ and when we only consider the sample of participants that responded correctly to both comprehension questions.

Table 6 reports our regression output after including, in addition, measures of general trust and risk love and their interaction with the time pressure treatment variable. We

Table 7: Cognitive Reflection Test - OLS

	(1)	(2)	(3)	(4)	(5)
pressure	0.0445	0.0415	-0.0028	0.0384	0.0202
	(0.1467)	(0.1468)	(0.1524)	(0.1465)	(0.1492)
basin	1.3448***	1.3445***	1.3446***	1.3438***	1.3440***
	(0.2095)	(0.2097)	(0.2099)	(0.2098)	(0.2099)
basin×pressure	-0.5778*	-0.5838*	-0.5757*	-0.5893*	-0.5834*
	(0.3136)	(0.3137)	(0.3143)	(0.3134)	(0.3137)
inexperience	-0.0535	-0.0454	-0.0386	-0.0391	-0.0351
	(0.0571)	(0.0567)	(0.0562)	(0.0566)	(0.0563)
inexperience×pressure	0.1552*	0.1575**	0.1377*	0.1604**	0.1474*
	(0.0801)	(0.0794)	(0.0803)	(0.0789)	(0.0800)
CRT01		-0.0209	-0.0449		
		(0.0237)	(0.0307)		
CRT01×pressure			0.0498		
			(0.0467)		
CRT02				-0.0870	-0.1202*
				(0.0527)	(0.0687)
CRT02×pressure					0.0725
					(0.1071)
Observations	711	711	711	711	711
R-sq	0.127	0.128	0.131	0.133	0.134
Treatment	All	All	All	All	All
Day Fe	Yes	Yes	Yes	Yes	Yes
Session Fe	Yes	Yes	Yes	Yes	Yes
Round Fe	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes

Note: The dependent variable is $stag_{it}$=1 if individual i chose *stag* in round t and =0 otherwise. Standard errors (in parentheses) are always clustered at the individual level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

obtain, as one would expect, that individuals with higher general trust in others (columns (2) and (3)) and those which are more risk lovers (columns (4) and (5)) tend to play *stag* more often. The coefficients on the interaction of these two variables with $pressure_{it}$ are negative and never statistically significant. When we include all these variables together, $trust_i$, $risklove_i$, and their interactions with $pressure_{it}$, our conclusions are also verified.

Table 7 reports our results when the two variables reflecting the Cognitive Reflection Test,

Table 8: Rational Experiential Inventory - OLS

	(1)	(2)	(3)	(4)	(5)
pressure	0.0445	0.0520	0.0412	0.0501	0.1863
	(0.1467)	(0.1485)	(0.1455)	(0.1472)	(0.5238)
basin	1.3448***	1.3453***	1.3452***	1.3457***	1.3466***
	(0.2095)	(0.2098)	(0.2098)	(0.2101)	(0.2106)
basin×pressure	-0.5778*	-0.5893*	-0.5947*	-0.6081*	-0.6100*
	(0.3136)	(0.3139)	(0.3142)	(0.3143)	(0.3153)
inexperience	-0.0535	-0.0555	-0.0514	-0.0536	-0.0454
	(0.0571)	(0.0568)	(0.0551)	(0.0548)	(0.0538)
inexperience×pressure	0.1552*	0.1471*	0.1676**	0.1586**	0.1417*
	(0.0801)	(0.0806)	(0.0783)	(0.0786)	(0.0813)
rational engage		-0.0715		-0.0837	-0.0402
		(0.0599)		(0.0604)	(0.0804)
rational engage×pressure					-0.0906
					(0.1254)
rational ability		0.0278		0.0384	-0.0574
		(0.0649)		(0.0652)	(0.0861)
rational ability×pressure					0.1801
					(0.1338)
experiential engage			0.0827*	0.0903*	0.1296**
			(0.0481)	(0.0479)	(0.0628)
experiential engage×pressure					-0.0883
					(0.0950)
experiential ability			-0.0936	-0.0969	-0.0712
			(0.0600)	(0.0592)	(0.0814)
experiential ability×pressure					-0.0493
					(0.1150)
Observations	711	711	711	711	711
R-squared	0.127	0.130	0.135	0.139	0.150
Treatment	All	All	All	All	All
Day Fe	Yes	Yes	Yes	Yes	Yes
Session Fe	Yes	Yes	Yes	Yes	Yes
Round Fe	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes

Note: The dependent variable is $stag_{it}$=1 if individual i chose *stag* in round t and =0 otherwise. Standard errors (in parentheses) are always clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

$CRT01_i$ (=1 is individual i responded correctly to at least one out of the three questions, =0 otherwise) and $CRT02_i$ (=1 if the individual responded correctly to at least two out of the three questions, =0 otherwise), are included as additional controls to our model. They are predictors of deliberative play. As one will see in columns (2) and (4), the estimated coefficients on these additional variables are negative (as predicted), but not statistically

Table 9: Personality Big Five Inventory - OLS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
pressure	0.0445	0.0434	0.0434	0.0621	0.0403	0.0322	0.0513
	(0.1467)	(0.1468)	(0.1466)	(0.1470)	(0.1458)	(0.1454)	(0.1449)
basin	1.3448***	1.3450***	1.3448***	1.3450***	1.3446***	1.3446***	1.3446***
	(0.2095)	(0.2096)	(0.2097)	(0.2097)	(0.2097)	(0.2097)	(0.2103)
basin×press	-0.5778*	-0.5773*	-0.5794*	-0.5897*	-0.5744*	-0.5761*	-0.5897*
	(0.3136)	(0.3137)	(0.3135)	(0.3142)	(0.3134)	(0.3129)	(0.3133)
inexperience	-0.0535	-0.0522	-0.0531	-0.0527	-0.0545	-0.0533	-0.0524
	(0.0571)	(0.0570)	(0.0568)	(0.0561)	(0.0573)	(0.0575)	(0.0563)
inexperience×pressure	0.1552*	0.1541*	0.1565*	0.1471*	0.1607**	0.1589**	0.1548**
	(0.0801)	(0.0801)	(0.0797)	(0.0796)	(0.0796)	(0.0790)	(0.0774)
extravertion		-0.0033					-0.0019
		(0.0093)					(0.0106)
agreeableness			0.0046				0.0031
			(0.0104)				(0.0114)
consciousness				-0.0130			-0.0193*
				(0.0098)			(0.0107)
emotiotional stab					0.0083		0.0118
					(0.0083)		(0.0091)
openness						-0.0150	-0.0147
						(0.0112)	(0.0118)
Observations	711	711	711	711	711	711	711
R-squared	0.127	0.127	0.127	0.130	0.129	0.131	0.139
Treatment	All	All	All	All	All	All	All
Day Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Session Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Round Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: The dependent variable is $stag_{it}$=1 if individual i chose *stag* in round t and =0 otherwise. Standard errors (in parentheses) are always clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

significant. However, when we also include the interaction between $CRT02_i$ and $pressure_{it}$ (column (5)), the coefficient on $CRT02_i$ (still negative) becomes statistically significant at least at the 10% level; hence the more deliberative an individual is, the less she/he tends to play *stag*; whereas the coefficient on the interaction turns out positive (but not statistically significant).

Table 8 shows our findings after investigating the role of the Rational-Experiential Inventory. We can observe that the only additional variable exerting a statistically significant effect here is $eengage_i$, standing for experiential engagement that captures individual reliance on (and enjoyment of employing) intuition in making decisions. As one would expect, the effect is positive and statistically significant.

Finally, when we employ in regression further variables capturing measures of personality traits, as we do in the Table 9, such as extraversion (column (2)), agreeableness (column (3)), self-consciousness (column (4)), emotional stability (column (5)), and openness to experiences (column (6)), our main conclusions remain unaltered. Moreover these additional variables do not, in general, exert any statistically significant effect on the probability of playing *stag*. The only exception is the variable $consciousness_i$, which is found to have a negative and statistically significant impact in column (7), when we include all the controls together. This variable captures one's responsiveness to the environment and deliberative attitude. Its negative effect on the probability of choosing *stag* is, then, in line with previous conclusions and expectations. The output reported in Table 9 is reassuring as it suggests that our results are not driven by omitted variables reflecting individual personality.

4.4 Two alternative interpretations

A natural question to ask is whether there are alternative explanations of the documented experimental evidence that challenge our adaptation of the SHH to stag hunt games.

A first candidate is that fast-thinking players are more likely to follow a heuristics that generates inertia in responses (Alós-Ferrer et al., 2016), i.e., that leads to choosing the same action in the four games ("since the games are of the same type, I will always play the same"), which is expected to be more likely to occur when an individual is under time pressure. This scenario could also account for the reduced sensitiveness of actual play to payoffs under the time pressure treatment. And, if we think that more experienced players are less likely to rely on such heuristics, it could imply, moreover, that the effect of the time constraint comes mostly from more inexperienced players.

For such explanation to drive our results, we should observe in the data that individuals that always play the same strategy in the four games are relatively fast and, in addition, a considerable fraction of them play *stag*. Such empirical patterns is, however, not supported by our experimental data. Indeed, as shown in Figure 9, while playing often *stag* is relatively fast in terms of response time, playing always *hare* is very slow under both control and time pressure treatments. So should there be, in our sample, individuals that follow the "same action for all the games" heuristics, they do not seem to have the general common characteristic of being fast-thinkers, unless there are other reasons for playing, in particular,

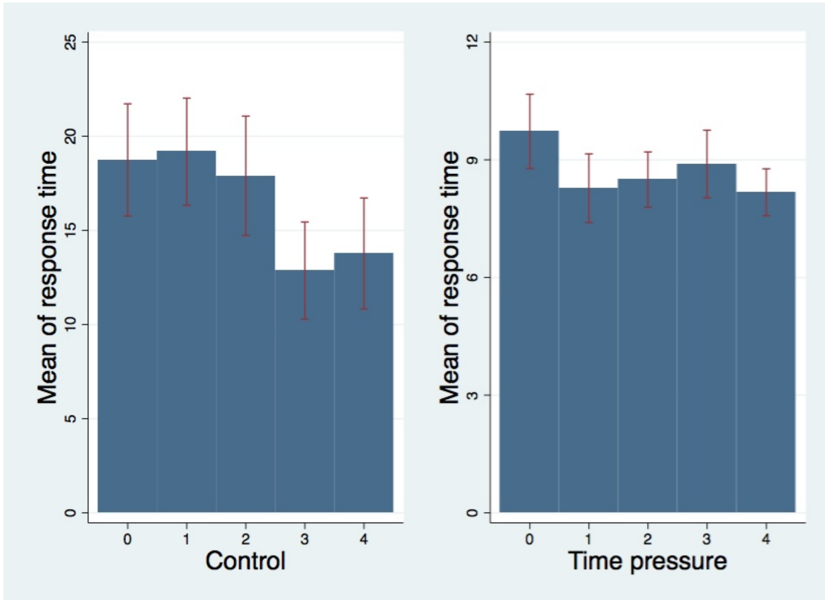

Figure 9: Average time per action choice, by treatment. The numbers 0, 1, 2, 3, 4 on the horizontal axis indicate the overall number of times that a player played *stag*.

the action *stag* (what would lead to our preferred interpretation based on the SHH). One may then wonder if our results are an artifact of *stag*-hunters to be fast for other cognitive characteristics independently of the time treatment: for instance, less deliberative individuals having priors on the first game that are more likely to induce *stag*. Data on CRT scores do not support such an interpretation. As shown in Figure 10, a pattern similar to that depicted in Figure 9 is obtained even when we condition for CRT being high (i.e., CRT $= 2$ or 3) or low (i.e., CRT $= 0$ or 1), which we use as a proxy for the likelihood that a deliberative mode of thinking is employed.

Another candidate explanation might have to do with individuals playing randomly when they have too little time to make a decision. For this to account for our experimental results, it should be that players who under the time pressure treatment play random actions would rather choose *hare* under the control treatment. Hence, under the control treatment (when no time constraint is imposed), we should observe that individuals that take more than 10 seconds to make a choice play *hare* with more than 50% probability.

However, under the control treatment, the fraction of *hare* choices for responses beyond 10 seconds is 52% (corresponding to 133 out of 257 responses; standard deviation 0.50), which decreases to 49% (corresponding to 137 out of 270 responses; standard deviation 0.50)

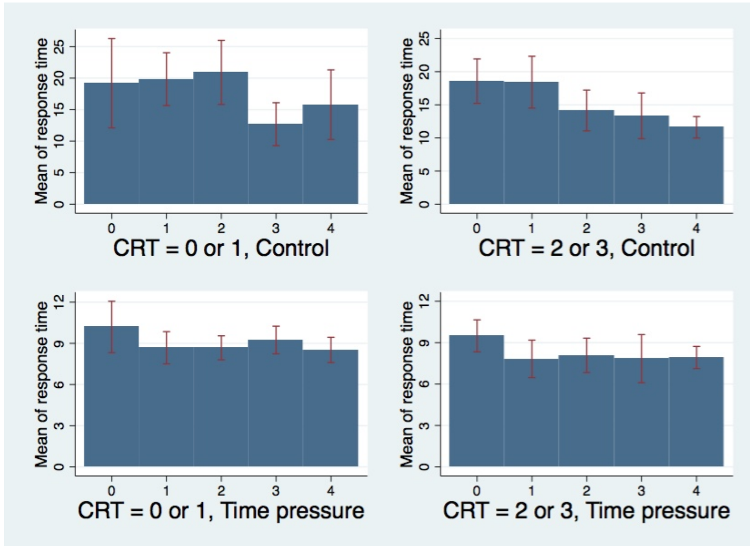

Figure 10: Average time per action choice, by treatment and CRT score. The numbers 0, 1, 2, 3, 4 on the horizontal axis indicate the overall number of times that a player played *stag*.

if we consider response times beyond 9 seconds. Even a massive switch to random play of these players would have not substantially increased the overall frequency of *stag* under the time pressure treatment, which is equal to 63%.

Two additional pieces of evidence confirm that under time pressure there is not a substantial random play. Figure 11 illustrates the differential distribution in response times between control and time pressure treatments (difference in the frequency of individuals making a decision in a certain time interval between the two treatments). The concentration of positive changes in the frequency of individuals responding in about (a little less than) 10 seconds suggests, if anything, that most of the treated players are trying to exploit entirely the available time slot, and so that random play is unlikely (if by random play we imagine something that is done in a few seconds right after looking at the game matrix). Furthermore, Figure 12 reports the fraction of *stag* choices per interval of response time, by treatment. As one can see, under the control treatment the very fast thinkers are more likely to play *stag*; while under the time constraint the frequency of *stag* is about 60% for all the time-intervals, with perhaps a higher frequency for individuals between 6 and 9 seconds. If some random play is possibly taking place below 4 seconds in the time pressure treatment (which can account for the reduction in the fraction of *stag* choices with respect to the control treatment), the same does not seem to hold for longer response times, which constitute the vast majority of

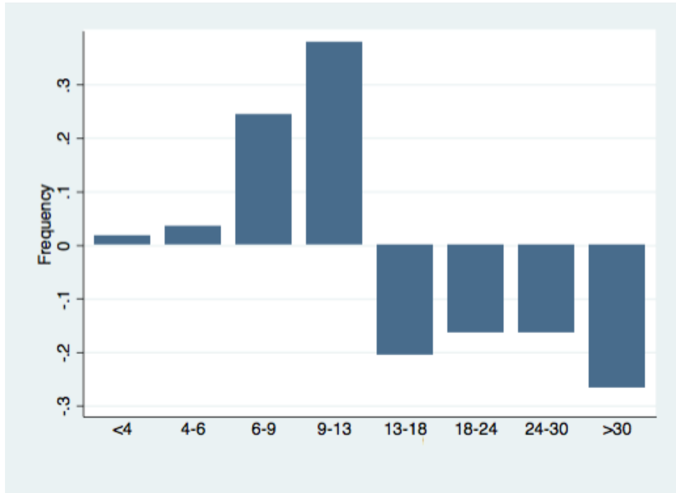

Figure 11: Difference in the relative frequency of choices made in given time intervals between control and time pressure treatments. Time intervals reported on the horizontal axis are in seconds.

the observations (about 95%).

5 Final remarks

In this paper, we have investigated the role of intuitive and deliberative thinking in coordination games and have presented a conceptual framework that rationalizes behavior adapting the SHH to stag hunt interactions. Then, we have presented experimental evidence looking for empirical support to or denial of its implications. All in all, our results suggest that the choice of *stag* is more likely when individuals rely on fast and intuitive rather than slow and deliberative thinking. Our work complements similar research on the effects of the adopted mode of thinking when individuals are involved in a prisoner dilemma or in a public good game (Rand, 2016).

Since *stag* can be interpreted as a more collaborative and trust giving behavior than *hare*, our contribution can be placed in the recent stream of literature investigating under what circumstances intuition and deliberation lead to pro-sociality (Greene, 2014). Yet, even if our results support intuition as being more conducive to pro-sociality, we cannot exclude that different effects of fast decision-making could be found when behavior is driven by automatic processes (Achtziger et al., 2016) or that deliberation could promote, instead, moral (e.g., Kantian) reasoning (Grossmann et al., 2017).

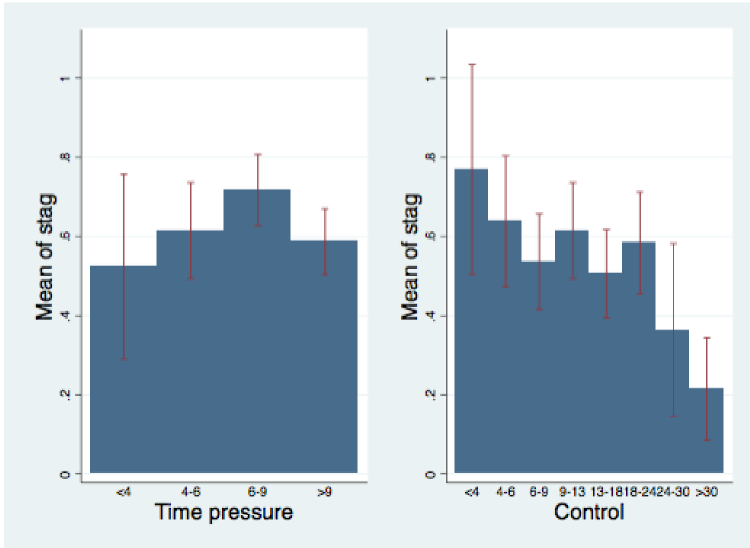

Figure 12: Average play of *stag* by response time and treatment. Time intervals reported on the horizontal axis are in seconds.

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A English translation of instructions

Slide 1 - Common to both treatments Welcome.

Thank you for choosing to participate in this experiment.

In this experiment, you will be asked to make choices and you will have the opportunity to earn a certain amount of money. You will be paid privately at the end of the experimental session. It is important that you remain silent for the duration of the experimental session and that you do not try to look at other people's choices in the lab.

If you have any questions, please, raise your hand and one of the experimenters will answer your question. You will be asked to leave the lab if you are found talking in a loud voice, laughing or making gestures, and you will not be paid. We greatly appreciate your cooperation during the experimental session. Please do not leave your sit until you are told.

The experiment consists in participating in some games, each of which consists of making a choice on the screen, by using the mouse on your right. Now, please, use your mouse to click on the "Proceed" button and continue. During the game, you can always consult the instructions sheet.

Slide 2 - Common to both treatments Before you play each game you will be randomly and anonymously paired with another student of this lab section. The amount of money you will earn depends on your choice and on the choice of the your partner. Your partner will not know your identity, just as you will not know yours. The interaction will only occur through the computer. You and your partner will simultaneously play the game.

The matching mechanism will be such that you will play each new game with a new partner. In other words, you will never play twice with the same person. None of the people in this lab will know your choices. We ask you not to communicate your choice to anyone of the other participants until the end of the experimental session.

Click "Proceed" to continue. During the game, you can always consult the instructions sheet.

Slide 3 - Control treatment only The experimental session is organised as follows:

(1) You will play some games.

(2) You will answer to a simple test to verify your understanding of the games

(3) You will answer a series of questionnaires that will take you about 20 minutes.

(4) You will be told your total score.

(5) You will be invited to leave the room and you will be paid a number of euro equal to your total score.

In the next slide, we will show you the screen that you will be facing during the game and we will explain in detail how to make your choices. We remind you to remain silent and raise your hand if you have any questions.

Follow the instructions on the screen now. We will read the description of what will be shown to you.

Click "Proceed" to continue. During the game, you can always consult the instruction sheet.

Slide 3 - Time pressure treatment only The experimental session is organised as follows:

(1) Your choice will have to be made within a given time interval that we will communicate later. The time passing will be shown on the screen that you will be facing during the experiment.

(2) You will play some games.

(3) You will answer to a simple test to verify your understanding of the games

(4) You will answer a series of questionnaires that will take you about 20 minutes.

(5) You will be told your total score.

(6) You will be invited to leave the room and you will be paid a number of euro equal to your total score.

In the next slide, we will show you the screen that you will be facing during the game and we will explain in detail how to make your choices. We remind you to remain silent and raise your hand if you have any questions.

Follow the instructions on the screen now. We will read the description of what will be shown to you.

Click "Proceed" to continue. During the game, you can always consult the instruction sheet.

Description read by the experimenter for slide 4 On the screen you will see a table that shows the scores you can get playing the game and that will determine the amount of money you can earn at the end. The payoff table that will be shown to you during the games is very similar to the one displayed now.

The same table will be show to your partner. As we have already said, your score, and how much money you will earn, will depend on the choices done, you will be notified at the end of the games.

In this table the payoffs are symbolically represented by X, Y, Z, W (during the game will be represented by numbers): - if your choice will be A and that of your partner will be A, you will receive $X1$ euros and your partner $X2$ euro; - if your choice will be A and that of your partner will be B, you will receive $Y1$ euros and your partner $Y2$ euro; - if your choice will be B and that of your partner will be A, you will receive $Z1$ euros and your partner $Z2$ euro; - if your choice will be B and that of your partner will be B, you will receive $W1$ euros and your partner $W2$ euro.

To make your choice you need to click on one of the two buttons below the table (A or B). Once you have made your choice, this cannot be changed.

Click on "Proceed" to proceed. During the game, you can always consult the instruction sheet.

Slide 5 - Common to both treatments The game will begin shortly. This is your last chance to ask for clarifications. Please, raise your hand if you have any questions for the experimenters. Otherwise, please remain silent and do not communicate with others in any way. Do not leave your sit until you are told.

B Appendix: Probit results and additional robustness checks

Table B1: Main results - Probit

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
pressure	0.1053**	0.0949*	0.0980*	0.0991*	0.0500		
	(0.0525)	(0.0533)	(0.0536)	(0.0552)	(0.1548)		
basin				1.1672***	1.4929***	0.6962***	1.6158***
				(0.1831)	(0.2444)	(0.2559)	(0.2583)
basin×pressure					-0.6863**		
					(0.3457)		
inexperience				0.0233	-0.0598	0.1008*	-0.0857
				(0.0426)	(0.0628)	(0.0561)	(0.0667)
inexp×press					0.1695*		
					(0.0876)		
Observations	711	711	711	711	711	323	388
Pseudo R-sq	0.0082	0.0505	0.0596	0.0884	0.0987	0.0408	0.1500
Day Fe	No	Yes	Yes	Yes	Yes	Yes	Yes
Session Fe	No	Yes	Yes	Yes	Yes	Yes	Yes
Round Fe	No	Yes	Yes	Yes	Yes	Yes	Yes
Individual contr	No	No	Yes	Yes	Yes	Yes	Yes
Treatment	All	All	All	All	All	Pressure	Control

Note: The dependent variable is $stag_{it}$=1 if individual i chose *stag* in round t and =0 otherwise. Marginal probit coefficients are calculated at the means. The coefficient on the linear combination of the coefficients on $pressure_{it}$, $basin_g \times pressure_{it}$ and $inexperience_i \times pressure_{it}$ computed at the means of the variables (0.25 for $basin_g$, and 1.3 for $inexperience_i$) is equal to 0.0989* (s.e.=0.0566). The test for the difference between the coefficients on $basin_g$ in columns (6) and (7) gives t-stat=5.72 (p-value=0.0168); that between the coefficients on $inexperience_i$ gives t-stat=4.65 (p-value=0.0310). Standard errors (in parenthesis) are always clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

Table B2: Game comprehension - Probit

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
pressure	0.0500	0.0474	0.0363	-0.0565	-0.2706	-0.0518	-0.3410
	(0.1548)	(0.1562)	(0.1723)	(0.1623)	(0.2021)	(0.1622)	(0.2155)
basin	1.4929***	1.4937***	1.4984***	1.5505***	1.5549***	1.5495***	1.5517***
	(0.2444)	(0.2443)	(0.2616)	(0.2514)	(0.2865)	(0.2513)	(0.3000)
basin×pressure	-0.6863**	-0.6875**	-0.7409**	-0.6690*	-0.5961	-0.6671*	-0.4383
	(0.3457)	(0.3453)	(0.3734)	(0.3589)	(0.4790)	(0.3586)	(0.5030)
inexperience	-0.0598	-0.0598	-0.0821	-0.0550	-0.1364*	-0.0550	-0.1514*
	(0.0628)	(0.0626)	(0.0666)	(0.0619)	(0.0735)	(0.0622)	(0.0806)
inexperience×pressure	0.1695*	0.1715*	0.2134**	0.2155**	0.3660***	0.2119**	0.4064***
	(0.0876)	(0.0886)	(0.0987)	(0.0895)	(0.1288)	(0.0897)	(0.1431)
test1		-0.0152				0.0322	
		(0.0773)				(0.0756)	
test2				-0.2419***		-0.2447***	
				(0.0564)		(0.0566)	
Observations	711	711	631	711	468	711	433
Pseudo R-sq	0.0987	0.0988	0.1100	0.1310	0.1260	0.1310	0.1350
Treatment	All	All	Stag Ok	All	Hare ok	All	Both ok
Day Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Session Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Round Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: The dependent variable is $stag_{it}$=1 if individual i chose *stag* in round t and =0 otherwise. Marginal probit coefficients are calculated at the means. Standard errors (in parenthesis) are always clustered at the individual level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table B3: Trust and Risk love - Probit

	(1)	(2)	(3)	(4)	(5)	(6)
pressure	0.0500	0.0534	0.2116	0.0629	0.2910	0.2887
	(0.1548)	(0.1565)	(0.2467)	(0.1569)	(0.3069)	(0.3068)
basin	1.4929***	1.5267***	1.5420***	1.5437***	1.5594***	1.5622***
	(0.2444)	(0.2495)	(0.2528)	(0.2509)	(0.2543)	(0.2553)
basin×pressure	-0.6863**	-0.7081**	-0.7289**	-0.7408**	-0.7583**	-0.7588**
	(0.3457)	(0.3529)	(0.3534)	(0.3554)	(0.3555)	(0.3560)
inexperience	-0.0598	-0.0659	-0.0683	-0.0763	-0.0797	-0.0786
	(0.0628)	(0.0619)	(0.0620)	(0.0624)	(0.0628)	(0.0629)
inexperience×pressure	0.1695*	0.1922**	0.1887**	0.1974**	0.1982**	0.1980**
	(0.0876)	(0.0868)	(0.0869)	(0.0879)	(0.0879)	(0.0883)
trust		0.0785***	0.0985***			0.0303
		(0.0279)	(0.0375)			(0.0515)
trust×pressure			-0.0440			-0.0184
			(0.0556)			(0.0763)
risklove				0.1333***	0.1614***	0.1305*
				(0.0400)	(0.0513)	(0.0711)
risklove×pressure					-0.0636	-0.0451
					(0.0796)	(0.1094)
Observations	711	711	711	711	711	711
Pseudo R-sq	0.0987	0.114	0.115	0.121	0.122	0.123
Treatment	All	All	All	All	All	All
Day Fe	Yes	Yes	Yes	Yes	Yes	Yes
Session Fe	Yes	Yes	Yes	Yes	Yes	Yes
Round Fe	Yes	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes

Note: The dependent variable is $stag_{it}$=1 if individual i chose *stag* in round t and =0 otherwise. Marginal probit coefficients are calculated at the means. Standard errors (in parenthesis) are always clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

Table B4: Cognitive Reflection Test - Probit

	(1)	(2)	(3)	(4)	(5)
pressure	0.0500	0.0476	0.0003	0.0470	0.0297
	(0.1548)	(0.1548)	(0.1614)	(0.1549)	(0.1571)
basin	1.4929***	1.4971***	1.5101***	1.5046***	1.5154***
	(0.2444)	(0.2444)	(0.2455)	(0.2452)	(0.2461)
basin×pressure	-0.6863**	-0.6981**	-0.7004**	-0.7123**	-0.7156**
	(0.3457)	(0.3463)	(0.3470)	(0.3476)	(0.3477)
inexperience	-0.0598	-0.0495	-0.0406	-0.0417	-0.0363
	(0.0628)	(0.0627)	(0.0624)	(0.0627)	(0.0628)
inexperience×pressure	0.1695*	0.1728**	0.1479*	0.1762**	0.1594*
	(0.0876)	(0.0873)	(0.0886)	(0.0872)	(0.0888)
CRT01		-0.0246	-0.0536		
		(0.0266)	(0.0352)		
CRT01×pressure			0.0585		
			(0.0526)		
CRT02				-0.0986*	-0.1385*
				(0.0581)	(0.0769)
CRT02×pressure					0.0841
					(0.1131)
Observations	711	711	711	711	711
Pseudo R-sq	0.0987	0.100	0.103	0.104	0.105
Treatment	All	All	All	All	All
Day Fe	Yes	Yes	Yes	Yes	Yes
Session Fe	Yes	Yes	Yes	Yes	Yes
Round Fe	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes

Note: The dependent variable is $stag_{it}$=1 if individual i chose *stag* in round t and =0 otherwise. Marginal probit coefficients are calculated at the means. Standard errors (in parenthesis) are always clustered at the individual level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table B5: Rational Experiential Inventory - Probit

	(1)	(2)	(3)	(4)	(5)
pressure	0.0500	0.0569	0.0459	0.0551	0.1866
	(0.1548)	(0.1561)	(0.1545)	(0.1559)	(0.5676)
basin	1.4929***	1.4971***	1.5058***	1.5121***	1.5354***
	(0.2444)	(0.2452)	(0.2453)	(0.2466)	(0.2488)
basin×pressure	-0.6863**	-0.6931**	-0.7102**	-0.7213**	-0.7286**
	(0.3457)	(0.3472)	(0.3471)	(0.3489)	(0.3533)
inexperience	-0.0598	-0.0619	-0.0585	-0.0606	-0.0509
	(0.0628)	(0.0624)	(0.0612)	(0.0608)	(0.0603)
inexperience×pressure	0.1695*	0.1609*	0.1855**	0.1757**	0.1583*
	(0.0876)	(0.0880)	(0.0866)	(0.0867)	(0.0889)
rational engage		-0.0815		-0.0969	-0.0499
		(0.0670)		(0.0678)	(0.0916)
rational engage×pressure					-0.0984
					(0.1385)
rational ability		0.0308		0.0434	-0.0685
		(0.0723)		(0.0728)	(0.0973)
rational ability×pressure					0.2051
					(0.1474)
emotional engage			0.0921*	0.1015*	0.1530**
			(0.0528)	(0.0527)	(0.0697)
emotional engage×pressure					-0.1050
					(0.1028)
emotional ability			-0.1074	-0.1120*	-0.0836
			(0.0659)	(0.0657)	(0.0912)
emotional ability×pressure					-0.0509
					(0.1273)
Observations	711	711	711	711	711
Pseudo R-sq	0.0987	0.102	0.106	0.110	0.119
Treatment	All	All	All	All	All
Day Fe	Yes	Yes	Yes	Yes	Yes
Session Fe	Yes	Yes	Yes	Yes	Yes
Round Fe	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes

Note: The dependent variable is $stag_{it}$=1 if individual i chose *stag* in round t and =0 otherwise. Marginal probit coefficients are calculated at the means. Standard errors (in parenthesis) are always clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

Table B6: Personality Big Five Inventory - Probit

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
pressure	0.0500	0.0489	0.0486	0.0710	0.0431	0.0331	0.0530
	(0.1548)	(0.1549)	(0.1549)	(0.1550)	(0.1540)	(0.1547)	(0.1543)
basin	1.4929***	1.4956***	1.4947***	1.5027***	1.4911***	1.4951***	1.5111***
	(0.2444)	(0.2443)	(0.2443)	(0.2456)	(0.2444)	(0.2453)	(0.2474)
basin×pressure	-0.6863**	-0.6881**	-0.6915**	-0.7042**	-0.6777*	-0.6828**	-0.7040**
	(0.3457)	(0.3456)	(0.3452)	(0.3469)	(0.3463)	(0.3472)	(0.3497)
inexperience	-0.0598	-0.0581	-0.0602	-0.0594	-0.0611	-0.0605	-0.0614
	(0.0628)	(0.0627)	(0.0624)	(0.0622)	(0.0630)	(0.0632)	(0.0622)
inexperience×pressure	0.1695*	0.1681*	0.1719**	0.1600*	0.1767**	0.1761**	0.1731**
	(0.0876)	(0.0877)	(0.0873)	(0.0874)	(0.0875)	(0.0867)	(0.0855)
extravertion		-0.0043					-0.0024
		(0.0101)					(0.0114)
agreeableness			0.0056				0.0042
			(0.0114)				(0.0124)
consciousness				-0.0148			-0.0223*
				(0.0110)			(0.0119)
emotional					0.0091		0.0132
					(0.0091)		(0.0100)
openness						-0.0168	-0.0165
						(0.0126)	(0.0132)
Observations	711	711	711	711	711	711	711
Pseudo R-sq	0.0987	0.0991	0.0992	0.102	0.100	0.102	0.110
Treatment	All	All	All	All	All	All	All
Day Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Session Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Round Fe	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: The dependent variable is $stag_{it}$=1 if individual i chose *stag* in round t and =0 otherwise. Marginal probit coefficients are calculated at the means. Standard errors (in parenthesis) are always clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

Table B7: Main results with predicted response for censored observations - OLS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
pressure	0.1049**	0.0995**	0.1016**	0.1027**	0.0394			0.2824*
	(0.0507)	(0.0484)	(0.0486)	(0.0487)	(0.1401)			(0.1454)
basin				1.0899***	1.3400***	0.7019***	1.4122***	
				(0.1606)	(0.2093)	(0.2315)	(0.2139)	
basin×press					-0.5308*			
					(0.2986)			
inexperience				0.0230	-0.0527	0.0959*	-0.0706	0.1113
				(0.0389)	(0.0570)	(0.0519)	(0.0578)	(0.1136)
inexp×press					0.1504*			
					(0.0783)			
test1								0.2625
								(0.1977)
test2								-0.6377***
								(0.1591)
trust								-0.0532
								(0.1092)
risklove								0.3841**
								(0.1552)
CRT02								-0.1590
								(0.1526)
ratio engage								-0.3231**
								(0.1624)
ratio ability								0.2212
								(0.1704)
exper engage								0.2238
								(0.1370)
exper ability								-0.2762*
								(0.1615)
Observations	740	740	740	740	740	352	388	711
(Pseudo)R-sq	0.012	0.069	0.079	0.116	0.128	0.057	0.188	0.142
Day Fe	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Session Fe	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Round Fe	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Game Fe	No	No	No	No	No	No	No	Yes
Individual contr	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Treatment	All	All	All	All	All	Pressure	Control	All

Note: Results in columns (1)-(7) are estimated by OLS, results in column (8) are estimated by probit. The dependent variable in columns (1)-(7) is the actual variable $stag_{it}$ (=1 if individual i chose *stag* in round t and =0 otherwise) except for censored cases under the time pressure treatment that are the predicted values from estimation reported in column (8). Marginal probit coefficients are calculated at the means. The coefficient on the linear combination of the coefficients on $pressure_{it}$, $basin_g \times pressure_{it}$ and $inexperience_i \times pressure_{it}$ computed at the means of the variables (0.25 for $basin_g$, and 1.3 for $inexperience_i$) is equal to 0.1022** (s.e.=0.0486). The test for the difference between the coefficients on $basin_g$ in columns (6) and (7) gives t-stat=5.28 (p-value=0.0216); that between the coefficients on $inexperience_i$ gives t-stat=4.70 (p-value=0.0302). Standard errors (in parenthesis) are always clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.

Table B8: Main results with predicted response for censored observations - Probit

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
pressure	0.1359***	0.1261**	0.1285**	0.1314**	0.1170			0.2824*
	(0.0503)	(0.0511)	(0.0514)	(0.0529)	(0.1459)			(0.1454)
basin				1.0875***	1.4813***	0.5559**	1.6158***	
				(0.1820)	(0.2423)	(0.2480)	(0.2583)	
basin×press					-0.8069**			
					(0.3431)			
inexperience				0.0225	-0.0603	0.0932*	-0.0857	0.1113
				(0.0408)	(0.0620)	(0.0510)	(0.0667)	(0.1136)
inexp×press					0.1653**			
					(0.0843)			
test1								0.2625
								(0.1977)
test2								-0.6377***
								(0.1591)
trust								-0.0532
								(0.1092)
risklove								0.3841**
								(0.1552)
CRT02								-0.1590
								(0.1526)
ratio engage								-0.3231**
								(0.1624)
ratio ability								0.2212
								(0.1704)
exper engage								0.2238
								(0.1370)
exper ability								-0.2762*
								(0.1615)
Observations	740	740	740	740	740	352	388	711
Pseudo R-sq	0.0141	0.0558	0.0646	0.0901	0.101	0.0357	0.150	0.142
Day Fe	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Session Fe	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Round Fe	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Game Fe	No	No	No	No	No	No	No	Yes
Individual contr	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Treatment	All	All	All	All	All	Pressure	Control	All

Note: Results in columns (1)-(8) are estimated by probit. The dependent variable in columns (1)-(7) is the actual variable $stag_{it}$ (=1 if individual i chose *stag* in round t and =0 otherwise) except for censored cases under the time pressure treatment that are the predicted values from estimation reported in column (8). Marginal probit coefficients are calculated at the means. The coefficient on the linear combination of the coefficients on $pressure_{it}$, $basin_g \times pressure_{it}$ and $inexperience_i \times pressure_{it}$ computed at the means of the variables (0.25 for $basin_g$, and 1.3 for $inexperience_i$) is equal to 0.1308 (s.e.=0.05467). The test for the difference between the coefficients on $basin_g$ in columns (6) and (7) gives t-stat=7.49 (p-value=0.0062); that between the coefficients on $inexperience_i$ gives t-stat=4.65 (p-value=0.0310). Standard errors (in parenthesis) are always clustered at the individual level. *** p<0.01, ** p<0.05, * p<0.1.