Intelligence 53 (2015) 51–58

Contents lists available at ScienceDirect

Intelligence

What is stupid? People's conception of unintelligent behavior

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ARTICLE INFO

Article history:
Received 1 May 2015
Received in revised form 13 July 2015
Accepted 31 August 2015
Available online 8 September 2015

Keywords:
Stupid
Unintelligent behavior
Implicit theory of stupid action

ABSTRACT

This paper argues that studying why and when people call certain actions stupid should be the interest of psychological investigations not just because it is a frequent everyday behavior, but also because it is a robust behavioral reflection of the rationalistic expectations to which people adjust their own behavior and expect others to. The relationship of intelligence and intelligent behavior has been the topic of recent debates, yet understanding why we call certain actions stupid irrespective of their cognitive abilities requires the understanding of what people mean when they call an action stupid. To study these questions empirically, we analyzed real-life examples where people called an action stupid. A collection of such stories was categorized by raters along a list of psychological concepts to explore what the causes are that people attribute to the stupid actions observed. We found that people use the label stupid for three separate types of situation: (1) violations of maintaining a balance between confidence and abilities; (2) failures of attention; and (3) lack of control. The level of observed stupidity was always amplified by higher responsibility being attributed to the actor and by the severity of the consequences of the action. These results bring us closer to understanding people's conception of unintelligent behavior while emphasizing the broader psychological perspectives of studying the attribute of stupid in everyday life.

1. Introduction

People's thoughts, feelings, and behavior are strongly influenced by how they interpret the behavior of others. These observed actions can be important for us because they are often relevant to our personal aims, but we also evaluate others' behavior in itself. These evaluations are affected by whether the observed behavior follows or violates our expectations. From the constant stream of behavior observation in everyday life, the expectation violations stand out as salient events to which people tend to give instant reactions. One common reaction to the negative violations of behavior expectations is to call the action 'stupid'. Mundane as it may sound, calling an action stupid is a robust behavioral reflection of the rationalistic expectations to which people adjust their own behavior and expect others to adjust theirs.

Studying the attribution of stupid should have psychological interest for several reasons. Firstly, it is a frequent everyday behavior and our knowledge of its social, affective and cognitive roots and consequences is scarce. Secondly, our behavior is often guided by the aim of avoiding actions that we might label 'stupid'. Understanding this categorization of actions and potential actions should inform us about what our behavior monitoring is tuned to, that is, what expectations we hold for our own and others' behavior. Thirdly, if calling one's actions stupid is a sign of interpersonal conflict, then understanding what people mean by this label can bring us closer to discovering the roots and, thus, a potential dissolution of the conflict.

The aim of the present research was to understand what people mean when they call an action stupid. In other words, what behavioral expectations need to be violated to elicit the use of this attribute. Specifically, we wanted to explore in what situations do people use the label 'stupid' and how can this label be interpreted by one or more psychological concepts (e.g., impulsivity, low intelligence). As the first exploration of the topic, we aimed to find what conditions are necessary for calling an action stupid (e.g., perceived responsibility of the actor, severity of the action).

Although people's implicit theory of stupid action has not yet been explored empirically, there have been speculations of several psychological factors that may contribute to unintelligent behavior in the non-clinical population. One stream of research interested in this topic is concerned with the relationship between intelligence and intelligent behavior. Sternberg (2002b) has emphasized the need for the exploration of the question, stating "*The world supports a multi-million-dollar industry in intelligence to succeed, but it devotes virtually nothing to determine who will best use this intelligence and who will squander it by engaging in amazing, breathtaking acts of stupidity*" (pp vii–viii). It is important

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http://dx.doi.org/10.1016/j.intell.2015.08.010
0160-2896/

to underline that here stupidity is always used as a state rather than a trait of the person: the term, as we use it here, refers to the description of an action without evaluating the person's intelligence or cognitive abilities. To avoid this confusion, Sternberg suggests using the term *foolish* instead of *stupid*. In his *imbalance theory of foolishness* (Sternberg, 2002a), foolish is the opposite of wise. In the earlier *balance theory of wisdom* (Sternberg, 1998), wisdom is defined as *"the application of tacit knowledge as mediated by values toward the achievement of a common good through a balance among multiple (a) intrapersonal, (b) interpersonal, and (c) extrapersonal interests in order to achieve a balance among (a) adaptation to existing environments, (b) shaping of existing environments, and (c) selection of new environments"* (p347). Therefore, wisdom is not equivalent to practical intelligence, but rather is an application of knowledge for the common good. Foolishness is the opposite of that: it is the faulty acquisition or application of tacit knowledge which leads to a failure of balance between intrapersonal, interpersonal, and extrapersonal interests. Powerful leaders, Sternberg argues, are particularly prone to lose this balance by acquiring three dispositions of overconfidence: sense of omniscience, sense of omnipotence and sense of invulnerability. Sternberg points to these dispositions as the main factors in foolish acts.

The book "Why Smart People Can Be So Stupid" has been dedicated to the anecdotal observation that people with high IQ are not resistant to actions that people would call stupid or silly. There, Hyman (2002) provides a list of examples of how undeniably smart people can go badly astray with their deliberate actions. He proposes the possibility that "smart people can be stupid *just because they are smart*" (p18), as they can detach from reality when using their intellectual abilities to create complex, albeit mistaken arguments to protect their own theories and opinions. In a more elaborate hypothesis, Charlton (2009a) introduces the model of "clever sillies", individuals with high-IQ having a tendency toward counter-intuitive thoughts and a lack of "common sense". Here, common sense is defined as being able to behave adaptively when dealing with basic human situations such as understanding, manipulating and predicting the behavior of others. According to the proposal, individuals with high IQ tend to neglect common sense and try to apply intelligence to problems of everyday life. Intelligence, however, has been developed for dealing with evolutionarily novel problems and the application of this complex and abstract thinking can be maladaptive when tackling problems for which natural selection has evolved adaptive solutions. For these high IQ individuals, the instinctive solutions are overwritten by more complex yet evolutionarily inappropriate analytic reasoning. These individuals, according to Charlton, often construct progressive left-wing political worldviews, ignoring common sense. To explain why high IQ is associated with leftist political orientation, Woodley (2010) suggested in his *Cultural Mediation Hypothesis* that this relationship is mainly culturally mediated. This theory is based on the observation that by the increase of wealth, a culture becomes more focused on the post-materialistic values such as equality (Inglehart, 1977). As high IQ individuals can better adapt to this shift, they would promote more altruistic views. In contrast, Dutton (2013) partly extended Charlton's view by suggesting that individuals with high IQ can fall in the trap of their intellect in two distinct ways. They either create ideas for the sake of their originality and to critique the status quo, or they have a tendency to follow these clever silly ideas (Dutton & van der Linden, 2015). Here, instead of cultural mediators, the association between leftism and IQ is traced back to two dimensions of personality: Openness to experience and Agreeableness. In a recent series of tests, Woodley of Menie and Dunkel (2015) found partial support for the mediating role of Openness to Experience to the relationship between IQ and leftism. However, as this relationship increases with age, the role of childhood environment seems to play an important cultural role. In sum, it is suggested that a higher level of general intelligence associated with certain personality dispositions (e.g., novelty seeking) can either hinder people from coping with worldly problems or to promote reactively counter-dominance views.

Others emphasize that otherwise intelligent people can diverge from sensible behavior not just by dispositions, but rather as a result of temporary lack of mindfulness. Mindfulness is a state of active attention to the present (Langer, 1989) while *mindlessness* leads to behaviors that are solely rule- and routine-governed (Moldoveanu & Langer, 2003). According to this suggestion, mindlessness can occur through repetition when we are following a familiar routine, acting on 'automatic pilot' without connecting the activity to our present goal. Mindlessness can also happen when we make a cognitive commitment to a piece of information without questioning it. With this uncritical acceptance of received information we limit ourselves to only one understanding of the world which might prevent us from acting the way that we would have wanted to act had we been more mindful. Van Hecke (2007) calls these actions *mental blind spots* and she argues that it can account for most of the behavior that we label as "stupidity". These blind spots prevent us from seeing what is obvious and what we would have noticed were our abilities not limited. According to this view, blind spots are most likely in information overload or when we are immersed in our everyday activities. One suggested solution here is to "step back" to see the "big picture". A relative interpretation of biases in judgment and decision making can be found in Fiedler's (2012) theory of Meta-Cognitive Myopia. The term refers to the empirical observations that people are capable of optimal cognitive performance (e.g., Oaksford & Chater, 2003), yet they are insensitive to the history or validity of the data (Einhorn & Hogarth, 1978). According to this view, people make systematic mistakes in judgment and decision-making tasks when the normative solution requires them to see beyond the given sample, that is, when critical inferences are to be made via metacognitive reasoning.

Stanovich (2012) approached the question from the research of individual differences in rational thinking. He builds his argument on the empirical observation that individual differences in intelligence do not correlate well with individual differences in rational thinking (Stanovich & West, 2008a; Stanovich & West, 2008b). Instead, he argues, thinking dispositions (sometimes referred to as cognitive style) can predict performance on rational thinking tasks independently of measures of cognitive abilities (Bruine de Bruin, Parker, & Fischhoff, 2007; Stanovich & West, 1998; Stanovich & West, 2001, Stanovich & West, 2008a, 2008b). Thinking disposition tests measure people's tendency to collect information before making judgments, to contrast various opinions, to think before making decisions, and to consider the future consequences of an outcome. Unlike measures of fluid intelligence, which measure the efficiency of cognitive processing, thinking disposition tests assess goal management and epistemic self-regulation, reflecting the operations of the *reflective mind*. Stanovich (2009a) differentiates between three levels of mind: the autonomous mind, the algorithmic mind, and the reflective mind. The autonomous mind is limited to so-called Type 1 processes (Evans, 2008). These processes are autonomous in the sense that when the triggering stimulus is encountered, their activation is mandatory (e.g., conditioned responses). These are fast responses that, due to being processed independently from higher-level control systems, can lead to irrational behavior. According to the model, most of our mistakes originate from badly controlled activations of the autonomous mind. This argument builds on models of judgment and decision making. In these models, the extensive list of biases demonstrating a persistent gap between descriptive and normative behavior (Gilovich, Griffin, & Kahneman, 2002; Kahneman, Slovic, & Tversky, 1982) is typically explained by the uncontrolled heuristic response. For example, attribute substitution (Kahneman & Frederick, 2002), which is a general explanation for most of the decision biases, is the result of Type 1 processes. When people are faced with questions requiring effortful deliberation, they are prone to substitute the effortful attribute for an easier one (e.g., representativeness). To prevent these biases, Type 1 answers need to be suppressed and corrected. The suppression is associated with executive functioning (Miyake et al., 2000) and the correction

depends on reasoning abilities. Stanovich (2012) argues that these are two separate functions within the category of Type 2 processing. The algorithmic mind refers to the cognitive abilities which can override the autonomous mind; however this override has to be initiated from a higher level: the so-called reflective mind. In the reflective mind, beliefs, attitudes and goals control the person's tendency to reflect on the Type 1 answer and arises from thinking dispositions such as open-minded thinking (Baron, 1993), hypothetical thinking (Evans, 2007), need for cognition (Cacioppo & Petty, 1982), dogmatism (Troldahl & Powell, 1965), and superstitious thinking (Epstein & Meier, 1989). Traditional measures of intelligence do not assess these aspects of rational thinking and behavior. Therefore, Stanovich finds psychometric as well as theoretical need for the development of a general measure of rationality (Stanovich, 2009b, 2012) to make up for the aspects of cognition that intelligence tests miss. This approach to rational and irrational behavior follows the tradition of emphasizing the formation of beliefs about consequences as the core aspect of rational decision making (Baron, 1985) and tries to dissolve the 'smart but dumb' paradox by restricting 'smart 'to the description of the algorithmic level, while dumb or stupid suggests limitations of the rational mind (Stanovich, 2002). This interpretation is consistent with that of Baron (1985), who notes when distinguishing intelligence and rationality: "*When we disapprovingly call a person 'stupid' because of some action, for example, a political leader, we do not often mean that the action was done too slowly, or that it would not have been done if the doer had a larger working memory capacity… When we call someone stupid, we are really saying he is irrational, not that he is retarded.*" (p 235).

Apart from overconfident dispositions and the failures of rationality, the topic can also be approached as a question of behavioral control. Perkins (2002) provides a framework for understanding stupidity as various failures of *self-organizing criticality*. Self-organizing criticality is a concept borrowed from physics describing dynamic systems that have a critical point as an attractor. For example an earthquake happens when the increasing stress of frictional resistance leads to a sudden release of energy. Perkins suggests that the simple bottom-up activity-switching mechanisms of human behavior work similarly. For example, increasing thirst will eventually trigger water-seeking activities. As thirst increases and approaches the critical point, activity switching becomes more likely. Perkins proposes that foolish episodes of behavior, such as impulsiveness, neglect, procrastination, vacillation, backsliding, indulgence or overdoing are the results of the failures of this emergent activity switching. More specifically, these failures happen when one of the phases of activity switching (Buildup of drivers, Critical phase, Trigger event, and Focal activity) is mismanaged. In the case of impulsiveness, after a strong buildup of drivers, the focal activity starts without sufficient control. In contrast, neglect happens when the buildup stage is too weak to reach the critical phase. Procrastination is the suppressed buildup of drivers, while vacillation happens when the buildup fluctuates between competing drivers, never reaching the focal activity. In the case of backsliding, if the new activity satisfies its drivers then the original drivers will recapture the old behavior. Indulgence happens when the buildup is so strong that it initiates the focal activity more often than desirable. In the case of overdoing, the drivers are strong, but the activity does not satisfy these drivers, so the activity is sustained. In general, Perkins finds that the difference between adaptive behavior and "folly" is made by the adequacy of timing and intensity of the critical phase and the persistence of the focal activity. Although Perkins limits his scope to the relationship between the drivers and the activation of the focal activity, this framework is probably not incompatible with the view of Stanovich if we were to envisage drivers in the realm of the autonomous mind with their control depending on the algorithmic mind guided by the rational mind.

What is common in these accounts is that they interpret irrational behavior from a normative perspective, regarding it from outside, and often contrasting it with the behavior of a fully informed ideal agent of unlimited mental capacity. In these accounts the expectation of the observed actors is not just to monitor their own behavior, but also to control it according to the prescribed norms. From the extensive literature of heuristics and decision biases we learn that people violate important normative expectations, but we know very little about the expectations against which people evaluate the behavior of others and themselves. Understanding people's naïve concept of rationality could bring us closer to gaining insight about what guides their behavior. In the present paper we argue that calling an action stupid in real life typically reflects a pronounced frustration with the observed action, and the view that the actor violated a general behavioral expectation of the observer. Here, we wanted to explore to what degree people share expectations when evaluating the actions of others and of themselves. Also, we aimed to understand these general expectations in psychological terms.

To study these questions empirically, we analyzed real-life examples where people called an action stupid. A collection of such stories was categorized by raters along a list of psychological concepts to explore what causes people to attribute the term 'stupid' to the observed actions. We also measured the assumed responsibility of the actor and the severity of the consequences of the action to study the relationship of these factors with the reported level of stupidity.

1.1. Questionnaire development

For the purpose of the study a questionnaire was formulated in which participants can be asked to rate and categorize stories in which an action or a decision was called stupid. Our stories were collected from popular online sources and from daily personal reports. The online sources were popular blogs (The Huffington Post, TMZ, blogs.guardian, blogs.nyt, Jezebel, Endgaget), news portals (The Guardian, The New York Times, BBC, Newser) and forums (The Student Room, Money Saving Expert, PistonHeads, Digital Spy). The searching criteria of the online stories were the following phrases: "stupid thing to", "stupidity", "it was stupid of", "it was very stupid" and "stupid".

In addition, 114 daily reports of 20 Hungarian- (17 females) and 6 English-speaking (3 females) university students were collected as offline sources. Participants had to record one short story every day for five consecutive days. Each story had to describe a real life event of that day where someone did something that the writer (or someone else) called, or could have called, a 'stupid thing to do'. They received a reminder e-mail every afternoon with a link pointing to the site where they could report their story.

The collected online and offline stories were assessed by 7 raters who were asked to decide whether the items satisfied our selection criteria. To be retained, a story had to meet the following criteria: (1) it contained either the phrase "stupid" or "stupidity"; (2) these words were used for describing an action or a decision; (3) the term 'stupid' was not used ironically; (4) the story was generally comprehensible without any additional background information; and (5) it was possible to summarize the story briefly. If any one of the raters judged that a story did not fit all of the criteria, the story was discarded from the collection. After this assessment process, 85 out of 90 stories remained in the collection from the internet sources: 30 from forums, 24 from blogs and 31 from news portals. From the daily reports, 83 out of 114 stories met the selection criteria. As a next step, all stories were transformed into a brief (~2 sentences) and unified form where all actor and place names were removed.

To explore the effects of severity of the consequences of the action and the assumed responsibility of the actor in the attribution of stupid, we modified the consequences of the actions or the responsibility of the actors in 12 stories. In 6 stories we manipulated the consequences of the action (decreased the consequences for stories involving severe consequences and increased the consequences for stories involving mild consequences), but in these stories the responsibility of the actor was retained. In the other 6 stories we manipulated the responsibility of the actor (eliminated responsibility from stories of high responsibility

Table 1
Potential causes of stupid actions collected from three sources.

Sources	Potential causes
Experts	Impulsivity, social pressure, selfishness, lack of education, lack of emotional or social skills, unfamiliar environment, lack of creativity, thoughtlessness, limited information, not learning from the failures
Literature	Low IQ, lack of wisdom, inattention, addiction, overconfidence, sense of omnipotence, sense of omniscience, sense of invulnerability, foolishness, low motivation, lack of critical thinking, hesitation, lack of practicality, dumbness, lack of resistance to temptation, lack of experience
Authors' suggestions	Fatigue, obsession, compulsive behavior, bluntness, excessive experience seeking

and added responsibility where the original story involved only accidental outcomes), but the consequences remained the same. Thus, the story pool contained a total of 180 stories (85 from online sources, 83 from daily reports and 12 modified stories).

To study the causes that people attribute to the stupid actions in the stories, a questionnaire was created using the final story pool. In this questionnaire the participants had to indicate which psychological factors might have played a role in causing or leading to the particular action they read in the story. The list of psychological factors were collected from three different sources: decision making experts, decision making literature and others added by the authors themselves. The expert opinions were collected from among the subscribers of the Society for Judgment and Decision Making mailing list. Here, the members of the forum replied to our survey asking "What psychological factors may come into play for an action to be considered stupid?". 16 experts completed our questionnaire naming 10 different potential factors. We also collected an additional 15 factors from the relevant literature (Sternberg, 2002a; Sternberg, 2002b), and 5 more factors were suggested by the authors (Table 1).

2. Method

2.1. Participants

Participants were 154 undergraduate students (122 females, mean age = 21.28 years, $SD = 2.78$) who received course credit for filling out our questionnaire. All the participants were native speakers of Hungarian.

2.2. Materials

To decrease the burden of the survey, 12 versions of the questionnaire were devised, each containing 15 stories from the story pool (manipulated stories were never in the same questionnaire with their originals). The stories were presented in a fixed sequence. The questionnaire contained 10 questions after each story: (1) would you call the action in the story 'stupid' (yes or no); (2) what exactly was 'stupid' in the story/if the action was not 'stupid' then how would you describe it (free writing); (3) how great is the level of stupidity in the story (10 point Likert-scale: 1: not at all stupid; 10: completely stupid); (4) which of 30 psychological factors played a role in causing or leading to the action (30 yes or no questions)[1]; (5) rate the level of responsibility of the actor (10 point Likert-scale: 1: not at all responsible; 10: completely responsible); (6) rate the level of responsibility of the environment (10 point Likert-scale: 1: not at all responsible; 10: completely responsible); (7) rate the level of seriousness of the consequences for the actor (10 point Likert-scale: 1: not at all serious; 10: completely serious); (8) rate the level of seriousness of the consequences for the environment (10 point Likert-scale: 1: not at all serious; 10: completely serious); (9) rate how humorous you find the action (10 point Likert-scale: 1: not at all humorous; 10: extremely humorous).

2.3. Procedure

The participants received the links to the questionnaires in emails and they filled out the questionnaires online. Ethical consent had to be accepted before proceeding to the questions. The completion of each questionnaire took 30–60 min. Most participants completed two questionnaires with the possibility of taking a break between the questionnaires. Each questionnaire was completed by 26–31 participants. Altogether, we obtained 344 fully completed questionnaires.

3. Results

The raters showed very high (ICC = .90) agreement on whether they would call the actions stupid or not. As our primary aim was to analyze the stories that people called stupid, cases where less than 25% of the raters labeled the action stupid were excluded from the analysis.[2] Moreover, we eliminated the answers where the rater found a different part of the story stupid than the other raters. Using these criteria, 33 stories were excluded from the analysis. The inter-rater reliability of the raters' judgment on the potential causes of stupid actions was good or excellent for 154 out of the 157 stories, ICC ranged between .61 and .99 with a mean of .88 ($SD = .06$). The remaining three stories with lower agreement scores were excluded from the dataset. Thus, ultimately data from 154 stories was retained for analysis.

Answers about each potential psychological cause of stupid action were aggregated using the proportions of 'yes' answers (0% meaning that no one thought that the given psychological factor caused the action in the story, while 100% indicating that all raters thought that the given label describes a causal factor in the 'stupid' action.

We performed a factor analysis on the psychological cause factors to identify variable groups of similar causes. (This step was necessary for data-reduction purposes, making our later results easier to interpret). A Principal Axis Factoring with oblique (direct oblimin) rotation was conducted on the ratings of these label items to identify latent variables. Items with low communalities were excluded until the communality of each retained item was above .40. 22 of the 30 items were retained in the final model. The analysis of the scree plot and eigenvalues suggested a six factor model. The model retained 66.35% of the total variance. Table 2 shows the factor loadings after rotation and the Cronbach-alpha scores of the factors. We named the six factors based on the factor loadings of the included items such as follows: 1. Risk taking; 2. Lack of control; 3, Lack of knowledge or social skills; 4. Absentmindedness; 5. Lack of practicality; and 6. Overconfidence. These factors will be referred to as the Six Causal Factors of stupid actions.

Next, a Latent Profile Analysis was conducted (using the Mclust R package, version 4; Fraley, Raftery, Murphy, & Scrucca, 2012) using the factor scores of the Six Causal Factors to find the latent cluster structure in which the 154 stories are organized. A three cluster model was retained based on model fit (Bayesian Information Criterion, BIC) and cluster membership probability statistics (log.likelihood = −1110.98; $N = 154$; $df = 38$; BIC = −2413.37; ICL = −2450.35). Based on the mean scores of the Six Causal Factors in the clusters, we named the three clusters as: 1. Confident ignorance ($n = 76$ [49%], mean probability of cluster membership = .89); 2. Absentmindedness–Lack of practicality ($n = 51$ [33%], mean probability of cluster membership = .92); 3.

[1] Out of our list of 30 factors (such as 'indecisiveness', 'inattention', 'social pressure', 'low IQ') the participants could select any number of the factors.

[2] We gathered 1878 answers where the participants didn't use the label 'stupid' for the actions. In an additional analysis we asked five independent raters to read and categorize the reasons the participants wrote when describing why not using the label 'stupid'. The raters agreement about the causes was excellent (ICC = .75) and they found that in the majority of the cases (91%) the participants didn't use the label 'stupid' because of the lack of the behavioral error (bad or wrong decision). In the remaining (9%) the participants argued that 'stupid' is not the best word to describe the current action.

Table 2
Results of factor analysis (structure matrix): direct oblimin rotated factor loadings.

Factor and item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Risk taking (factor 1)						
Excessive experience seeking	.80					
Lack of resistance to temptation	.70	−.50				
Belief in invulnerability	.66					.65
Thoughtlessness	.64					.46
Lack of control (factor 2)						
Obsession		−.83				
Compulsive behavior		−.80				
Addiction		−.79				
Lack of knowledge or social skills (factor 3)						
Low IQ			.87			
Dumbness	.42		.76			
Lack of wisdom	.46		.71	−.45		.48
Lack of education			.70			
Lack of emotional or social skills			.56		−.50	
Selfishness			.50		−.45	
Absent mindedness (factor 4)						
Foolishness				.87		
Inattention				.79		
Lack of practicality (factor 5)						
Lack of practicality					.84	
Lack of experience					.81	
Overconfidence (factor 6)						
Belief in omnipotence						.83
Overconfidence	.59					.82
Belief in omniscience						.74
Lack of critical thinking	.51		.54	−.41		.56
Hesitation						−.48
α	.79	.82	.84	.83	.80	.80

Notes. Values lower than .40 are not shown.

Lack of control ($n = 27$ [18%], mean probability of cluster membership = .90). Fig. 1 shows the mean factor scores of the Six Causal Factors with .95 confidence intervals.

A One-way ANOVA confirmed that the level of stupidity is different in the three stupidity clusters, $F(2.142) = 35.92$, $p < .001$, $\eta_p^2 = .34$. LSD post-hoc analysis confirmed that all three groups are statistically different from each other in the level of rated stupidity ($ps < .01$). Absentmindedness–Lack of practicality ($M = 7.32$. $SD = 0.71$) < Lack of control ($M = 8.03$. $SD = 0.87$) < Confident ignorance ($M = 8.49$. $SD = 0.70$).

To explore the determinants of the level of stupidity a multiple regression analysis was conducted with the level of stupidity as dependent variable.[3] Five predictors were considered in Model 1: 1) stupidity cluster; 2) responsibility of the actor; 3) responsibility of the environment; 4) consequences for the actor; 5) consequences for the environment. Subsequently, 'responsibility of the environment' was dropped from the predictors because its correlation with responsibility of the actor was very high, $r(142) = -.70$, $p < .001$, and thus including both factors was deemed redundant. All the four retained predictors had a significant contribution to the model. The total explained variance (adjusted R^2) was 57.9%. As a sensitivity analysis, the regression was repeated with 'responsibility of the environment' being included as a predictor. Model fit and explained variance showed only slight improvement (AIC = from 262.76 to 258.79, R^2 = from 57.9% to 59.3%). Table 3 shows the results of Model 1.

According to Model 1, the cluster is an important predictor variable of the level of stupidity in addition to responsibility and the consequences. We tested this statement with an additional regression analysis, where the cluster variable was excluded from the model. The test confirmed the effect of stupidity cluster, the adjusted R^2 decreased by 5.36% and the AIC score increased by 15.4.

To explore the role of the assumed responsibility of the actor and the severity of the consequences of the action in attributing an action as stupid, our questionnaire contained six stories where the level of responsibility of the actor was manipulated (high/low), and another six stories where the consequences for the actor was manipulated (serious/negligible). A Mann–Whitney U test on the effect of the responsibility-manipulation showed significantly different ($Z = 16.33$, $p < .001$) responsibility rating between the stories with high responsibility ($Mdn = 9$) and low responsibility ($Mdn = 6$). The adequacy of the seriousness-of-consequence manipulation was tested the same way. A Mann–Whitney U test indicated that the manipulation was successful ($Z = 16.20$, $p < .001$), receiving different ratings for the stories with serious consequences ($Mdn = 8$) than for stories with negligible consequences ($Mdn = 2$).

Next, the effect of the responsibility and seriousness-of-consequence manipulation was tested on the usage of the label 'stupid' in separate logistic regression models. In the first model, the manipulated level of responsibility (high/low) was the predictor variable, while in the second model, the manipulated seriousness of consequence was the predictor (serious/negligible). The dependent variable was the usage of the label 'stupid' (yes/no)[4] in both models (see Tables 4 and 5 for results). The test indicates that the actions with high responsibility were more often rated as being stupid ($OR = 1.89$). Similarly, actions with serious consequences were more often rated as stupid ($OR = 3.07$). These results show that the perceived responsibility of the actor and the perceived consequences have effect not just on the level, but also on the presence of stupidity.

It is important to note that an adverse consequence for the actor is not a necessary prerequisite for labeling an action stupid. In 179 cases (5.4% of all answers with stupidity detection) the raters named the actions stupid despite the fact that they rated all the consequences of the actions as negligible. In contrast, labeling an action stupid when the actor doesn't have any responsibility was a very infrequent event in our data (18 cases; 0.5% of all answers with stupidity detection).

4. Discussion

The starting position of this study was the claim that calling an action stupid is a behavioral reflection of the expectations to which people adjust their own behavior and expect others to adjust theirs. First, we wanted to explore the extent to which people agree on whether they would attribute to an action the label 'stupid'. Our analysis showed a very high level of agreement among the raters in this question. Similarly, when we asked raters to select the potential causes of the stupid actions in the stories, the agreement was again good or excellent in 98% of the presented stories. It seems, therefore, that people, at least in the culture of the raters, share those expectations which need to be violated in order to call an action stupid. A Latent Profile Analysis revealed that people use this label to describe three different situations. The first situation in which people call an action stupid is when the actor takes high risks while lacking the necessary skills to perform the risky action. A typical story for this is when burglars wanted to steal cell phones, but instead stole GPS navigation devices. They didn't switch them off so the police were able to track them easily. We named this category 'Confident ignorance'. The second cluster consisted cases of 'Absentmindedness – Lack of practicality'. At first, it might seem surprising that these two factors belong to the same cluster. Although, one possible explanation for this result can be that the raters selected these two labels together for those stories where they could not decide whether the actor failed a practical task because of low practical intelligence or

[3] The manipulated stories were excluded from this analysis; therefore the sample size was 144 stories.

[4] For the analyses, the original (dichotomous) answers of the participants about the presence of stupidity were used instead of the aggregated proportions.

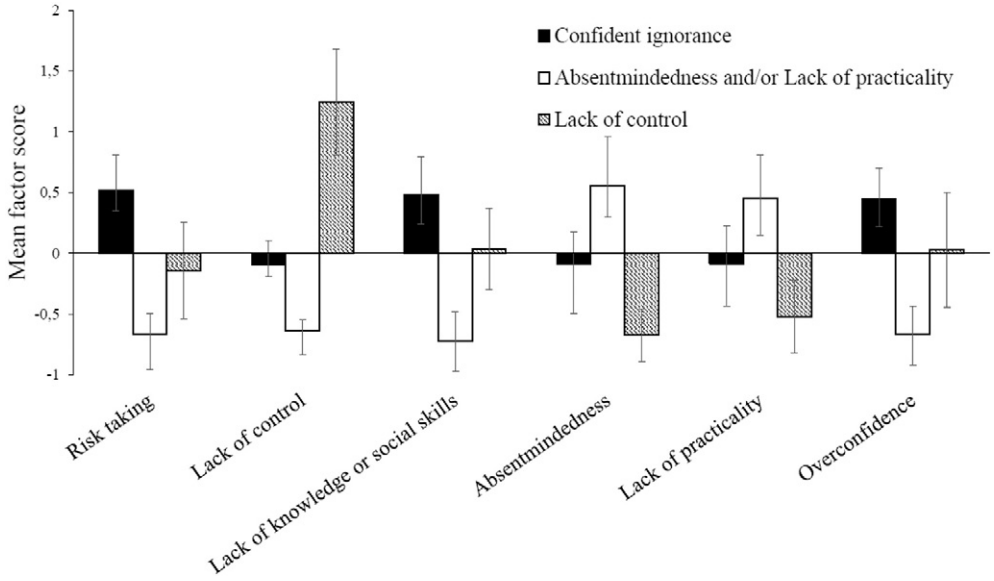

Fig. 1. The mean factor scores of the Six Causal Factors with .95 confidence intervals.

because he or she was inattentive during the action. If this assumption is true then it cannot be excluded that practical intelligence might form a separate category or could belong to another category. A typical story here is when someone inflates more air in the car tires than allowed. Here the person either forgot to pay attention to the action or he or she doesn't know something essential about tire inflation. The third category is 'Lack of control'. Cases here are thought to be the result of obsessive, compulsive or addictive behavior. For example, one of the stories in this category described a person who canceled a meeting with a good friend to instead continue playing video games at home.

The analysis also indicated that the type of stupidity has a significant effect on the level of stupidity. Raters were the most lenient for the cluster of Absentmindedness – Lack or practicality and rated cases of Confident ignorance the highest on the stupidity scale. This effect was present even after controlling for the responsibility of the actor and the severity of the consequence of the action.

Our stupidity categories show striking similarities with previous speculations in the literature. For example, the framework of Stanovich and West (2008a) and Stanovich and West (2008b) describes the different paths which can lead decision makers to follow a heuristic response instead of the normative response. Here, the first question is whether the necessary procedures and declarative knowledge are available for the decision maker to override the heuristic answer. Even if the necessary mindware is available, it is still possible that the person doesn't detect the need to override the heuristic response for the correct answer. To avoid the incorrect answer, the decision maker still needs to have the capacity to sustain override. Failure of the task, therefore, can happen at each level of this route. A similar suggestion is made by De Neys and Bonnefon (2013) who argue that thinking biases can occur at different points in the reasoning process. According to this conjecture, a bias can be the result of storage failure, monitoring failure or inhibition failure. These accounts suggest categories not dissimilar to the clusters we found in our present study. Confident ignorance could be regarded as storage failure. If people don't have the necessary knowledge to successfully execute an action with possible serious consequences then there are two possible events. One is that they do not initiate the action. In this case, we won't hear about it. The other one is that they still act and increase the likelihood that people will regard them as taking unnecessary risks. Absentmindedness can be taken as monitoring failure, although the Lack of practicality doesn't fit into this conception. Whether it could be taken as storage failure remains an open question. Lack of control and inhibition failure are not far from each other either, yet, the concepts are certainly not fully equivalent.

These stupidity categories can potentially predict what environmental or inner states increase the likelihood that one would behave in a way that others could call stupid. For example, ingested substances or excessive social support can promote confidence disproportionate to competence. Executing habitual behaviors or multi-tasking can lead to absentmindedness. Intensive affective states can result in failure of behavior control. Our findings would suggest that these environmental or inner contexts make us more susceptible to commit foolishness. An interaction of individual differences and environmental factors may

Table 3
Results of multiple regression with the level of stupidity.

Model and predictor	B	SE B	β	p
Model 1 (R^2 adjusted = 57.9%, $p < .001$, AIC = 262.77)				
Intercept	3.146	0.61		<.001
Lack of control vs. absentmindedness–lack of practicality	0.50	0.15	.22	<.001
Confident ignorance vs. absentmindedness–lack of practicality	0.56	0.13	.32	<.001
Responsibility of the actor	0.35	0.07	.29	<.001
Consequences for the actor	0.15	0.03	.33	<.001
Consequences for the environment	0.11	0.02	.27	<.001

Notes. Absentmindedness–lack of practicality cluster was the default level for the comparisons of the stupidity clusters.

Table 4
Results of logistic regression with responsibility of the actor as dependent variable.

Model and variable	B	B SE	Wald statistics	p	Odds ratio (95% CI)
Model ($\chi^2(1) = 7.92$, $p = .005$, AIC = 453.22, Nagelkerke $R^2 = .03$)					
Intercept	0.45	0.15	2.94	.003	1.56(1.16–2.11)
Responsibility	0.64	0.23	2.79	.005	1.89(1.21–2.97)

Table 5
Results of logistic regression with seriousness of the consequences of the action as dependent variable.

Model and variable	B	B SE	Wald statistics	p	Odds ratio (95% CI)
Model ($\chi^2(1) = 23.28$, $p < .001$, AIC = 430.22, Nagelkerke $R^2 = .09$)					
Intercept	0.24	0.15	1.58	.11	1.27(0.94–1.71)
Consequences	1.12	0.24	4.70	<.001	3.07(1.93–4.93)

serve as predictors for people's propensity to show behavior that others would label as stupid.

To explore what other factors determine the level of observed stupidity, we analyzed the role of outcome severity and actor responsibility in the ratings. The results indicated that the Type of Stupidity, the Responsibility of the Actor, the Seriousness of Consequences for the actor and the Seriousness of Consequences for the environment together explained 58% of the variation in the reported level of stupidity. The effect sizes of these predictors were all in the range of $\beta = .22–.33$. It is not surprising that people judge an action more stupid if it resulted in more severe consequences. People's tendency to judge actions based on their outcomes is a well described bias in the decision literature (Baron & Hershey, 1988). The result that the type of stupidity yields an independent effect on the level of stupidity underlines our finding that attribution of 'stupid' dissociates between situations. The result that people attribute greater levels of stupidity if the action was committed by a person with higher responsibility suggests an explanation as to why experts and people in leadership positions receive more fervent scorn (Sternberg, 2002b).

Next we wanted to understand whether assumed responsibility of the actor and severe consequences of the action are necessary (although not sufficient) criteria for people to call an action stupid. We modified six stories so that the actor would not be responsible for the action and wanted to see whether people would still call these actions stupid. We found such a limited number (<1%) of answers with this pattern that it is possible that the assumed responsibility of the actor is a prerequisite for calling the action stupid. In contrast, when the raters found that the action had no consequences then they still rated them stupid in more than 5%. For example, when celebrating their exam results, students climbed in and out of a ground floor window. Here the action could have not had any serious consequence, but was simply a pointless prank.

Through the present research we gained insight into the level that people agree on whether to call an action stupid or not; the different types of situations that people label stupid; and the determinants of the level of observed stupidity. Furthermore, from a broader perspective, studying what actions are attributed as stupid can shed light on people's behavioral expectations. We believe that to tackle questions such as why we sometimes find the behaviors of certain groups of people (e.g., scientists; Charlton, 2009b) silly or stupid we have to differentiate between the scientific observation of the researcher and the impression of the naïve observer. From the aspect of rationality, 'stupid' certainly does not show a perfect overlap with 'irrational'. From one aspect, people might call certain rational actions stupid. For example, people often try to argue vehemently that the normative solution of the Monty Hall Problem must be wrong (vos Savant, 1990). On the other hand, the decision bias literature constitutes the claim that in well-described situations people often do not detect the violations of normative logic. This discrepancy in the overlap between what people detect and what they are expected to detect shows the fallibility and limitations of our monitoring functions. Our knowledge is extensive about what people miss, yet the present study argues for the need to understand what people detect as a violation of expectations. By this, we could gain more insight into why people notice certain mistakes more easily than others. This knowledge could also assist us in translating the "smart but stupid" impression into better-defined psychological terms.

It is to be noted that a fuller exploration of this issue requires a shared understanding of what counts as intelligent. Multiple conceptualizations of intelligence exist and some researchers argue that the traditional operationalization of human intelligence is severely limited. For example, Sternberg (1999) suggested that to achieve one's goal in life requires the combination of *analytic*, *creative,* as well as *practical intelligence*. Mayer and Salovey (1993) extended the scope by providing a model for the interpretation of *emotional intelligence*. According to Gardner's (1983) *Theory of Multiple Intelligences*, behavior can be evaluated by at least eight criteria to be considered as intelligent. Kaufman takes one step further in his *Theory of Personal Intelligence* (2013) by deliberating the definition from external expectations, suggesting that intelligence should be defined solely in relation to the person's behavior of narrowing the distance between the starting state and the goal state of the given person. In this sense, intelligence should be understood as intelligent behavior. One challenge in any attempt to define intelligent behavior is that people can have opposing goals simultaneously, based on different timeframes. For example, when a student has a boring lecture to go to, but also feels like having a drink with her friends, then choosing either behavior could lead to one of her goals, just within different timeframes. In reflection, the person may regard either of the actions as better than the other, depending on her present time-perspective. Another challenge with the identification of intelligent behavior arises if we want to evaluate the behavior at hand by comparing it to the other possible behaviors the person could have pursued to achieve her goal. Unlike in the case of standardized tests, the ultimate solution is not always known in real life. Upon the discovery of a more adaptive solution, our previous behavior might seem unintelligent. For example, if speeding is found to be reduced when the drivers can see patrols standing on the road side then we could call the mayor's action to send patrols there as intelligent. Yet, if we learn that we can reach the same result by standing patrol-silhouettes then we may say that it wasn't intelligent of the mayor to send out the patrols. In this respect, intelligent behavior remains dependent on people's temporary goals and our knowledge of the array of alternative behaviors. Unintelligent behavior, however, is often fairly uncontroversial. For example, when the person herself regrets the action or when it leads to obvious loss, then it seems straightforward that the action wasn't an intelligent choice. For example, when the poacher forgot to take the electric rods out of the water before going in to collect the fish it would be hard to find a sensible argument that the action served the person's goals. The study of intelligent behavior, therefore, may benefit from understanding its flipside, *un*intelligent behavior, which in turn may be inherently linked to our conception of stupid actions.

A different research aim that this study might encourage is to understand why people often feel compelled to call certain actions stupid, and whether it serves any important adaptive function. It is an everyday observation that people experience negative feelings when their actions receive this label. Taking this view, we could think, in a strictly speculative manner, that 'stupid' is a specialized negative affective 'stamp' that we tag on actions that we believe better to be avoided for adaptive functioning. It could be argued that if taboos and traditions serve a function to reinforce adaptive behaviors regarding well-described situations and circumstances then calling an action stupid has a similar adaptive function on a general level. This general level is more about keeping behavior in accord with beliefs than about doing or not doing a concrete action. Sustaining attention, keeping balance between confidence and abilities, or controlling impulses seem to be domains which require continuous monitoring. Motivation for sustained monitoring and control might come partly from the aim to avoid further 'stamping'. One could argue that the internalization of the stamping of stupid and similar expressions (e.g., silly, foolish etc.), became one of the main cultural means to reinforce behavioral monitoring.

In summary, studying what people mean when they call an action stupid and when they feel compelled to use this label can reveal important aspects about how we monitor the behavior of others and our own. The understanding of what our monitoring is tuned to can explain more about the observed discrepancies between naïve and normative rationality. In the present research, we found that people use the label 'stupid' for three separate types of situation. In these, they find the violation of keeping a balance between confidence and abilities the most serious, followed by the lack of control, and they were the most lenient with the failures of attention. The level of observed stupidity

was always amplified by higher responsibility of the actor and by the severity of the consequences of the action.

As a first empirical exploration of the topic, this study naturally comes with a number of limitations and opens several questions to be answered. Since we collected stories from popular internet websites and used only local raters, it remains unanswered how much is the concept of stupid and to what extent are the monitoring functions culturally specific. Similarly, as the raters did not know the personal background of the actors, they were limited to infer to causes such as 'not learning from failures' and they could not be sure at certain cases if the actor is not good at practical questions or just didn't pay attention that time. It would be interesting to see in further research if people label others' actions differently than their own; if more successful people are more prone to this attribution; and to what degree are the present findings true for synonyms of stupid (e.g., silly, foolish etc.). From a broader perspective, it could be interesting to explore further the characteristics of the rationalistic norms that people use in monitoring and evaluating behavior.

Acknowledgments

We would like to thank Andrei Foldes and Adam Takacs for their help in the preparation of the project, as well as Melissa Wood and Scott Kaufman for their comments on an earlier draft of this manuscript.

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