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Human Foibles or Systemic Failure -- Lay Perceptions of the  
2008-09 Financial Crisis

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### Abstract

We examined lay perceptions of the recent financial and economic crisis through 1707 questionnaires, administered via internet, to a varied group of volunteers in a range of countries: France, the US, Russia, Germany, Israel, and sub-Saharan Africa. Respondents graded the contribution of a large number of possible factors to the crisis, and answered several complementary questions. We were able to identify two major conceptions, one seeing the economy as comprised of individuals, with failings of moral or cognitive character, and the other seeing the economy as a complex system, endowed with some resilience, functioning in cycles. Support for the former view was stronger than for the latter. Several demographic variables were found to affect these perspectives significantly, including SES, economic training, religious beliefs, and the extent to which the respondent was personally affected by the crisis.

### Human Foibles or Systemic Failure -- Lay Perceptions of the 2008-09 Financial Crisis

Over the past several years, there has been an increasing interest in the way the lay public understand economic matters, with the realization that that perception is itself a significant economic factor.

Differences between the public and professional economists have been noted. Blendon et al. (1997) report the results of two surveys, one of economists, the other of the public, and find that the public has a bleaker picture of what has happened economically to the average family and is more pessimistic than most economists about the intermediate future. The public also cite different reasons than economists do for why the economy is not doing better. Further studies suggest that economic beliefs of economists and of the public differ systematically. The relative importance ascribed by the respondents to economic factors diverge. Economists, for instance, consider foreign trade and downsizing as helpful, accept supply and demand explanations rather than monopolistic explanations of price changes more than people without background in economics. Additional studies of lay understanding of economics have concentrated on the effects of various psychological, social and economic traits with factors such as education, income or job security affecting their outlook (Allen, Ng et al. 2005; Bastounis, Leiser et al. 2004; Caplan, 2001; Lewis, Snell et al. 1987; Walstad and Rebeck, 2002;. In particular, economic training, as may be expected, is a significant factor, and Caplan (2007) derives far-reaching consequences for the democratic process from these disparities.

A different perspective on lay understanding of economics relies on the social representations approach to discover relations between concepts. The human mind is not particularly prepared to think about economics (Leiser and Aroch, 2009, Pinker 2002; Rubin 2003). Social representations are defined as socially shared ideas, opinions, attitudes, and theories (Moscovici, 1981, 1984). They are influenced by public discourse (electronic mass media, newspapers, schools, the discourse of politicians and so forth), yet have also their own coherence. Social representations affect the diffusion of the normative theories elaborated and used by professionals, distorting and modulating them while assimilating them (Leiser and Drori, 2005; Vergès, 1989).

The 2008-2009 financial crisis is a particularly appropriate occasion to further these investigations: the crisis is to a significant extent a crisis in trust, with perceptions by the public affecting public policy and conversely. It is also a systemic crisis, one that affected all branches of the economy, and an international one, in which household prices in California affected the economy of Iceland. Finally, it has also been described as caused by "animal spirits", the phrase Akerlof and Shiller (2009) adopt to discuss a variety of emotional and irrational factors that impact decision processing. The question we set out to answer is: how does the public perceive the crisis, and how is its understanding of the crisis affected by various independent factors, such as socio-economic status, having received a formal training in economics, being personally affected by the crisis, or religion.

As detailed in the methodological section below, we used a questionnaire consisting of 38 items along several identifiable dimensions.

## Method

### *A. Procedure*

We publicized through the Internet an online SurveyMonkey questionnaire which contained both open questions and questions requiring answers over a 6-points Likert-scale. Socio-demographic information was requested and the questionnaire proceeded in consecutive web-pages presenting blocks of questions, totaling to 38 questions. Subjects could stop the questionnaire at any time. Overall, of the people who started the questionnaires, 68% completed it. We used all the answers, including those in incomplete questionnaires. Most of the data were collected in the course June and July 2009, while the German and Russian samples were collected in August and September 2009.

### *B. Demographics*

We collected answers on our questionnaire across different countries, after publicizing the questionnaire in those countries. The number of participants for the different countries is given in the lower line: USA: 245, Russia: 168, Israel: 447, France: 384, Sub-Saharan Africa: 92, Germany: 311. The sample contained

661 female participants and 760 males; 726 singles and 550 married, the others being divorcees, widows and other types of associations between individuals. The average age was 37 (SD = 13) and their average years of schooling 13 years (SD: 6). We asked them specifically about their training in economics, if any: no training: 651; high school economics: 189; post high school course: 356; college degree or more: 215. Regarding occupation, 633 participants declared to be salaried employees, 146 self-employed, 68 unemployed and 418 were students. While students form an important part of our sample, the student population represents less than a third of it. We made a special effort to reach out to layers of the population who were involved in a more direct or full-time way in economic activities than is generally the case with students, and invited people from various internet forums to enter. Likewise we tried to diversify the social background of our population, as presented in the following table, using their self-perceived socio-economic status which were: Low: 52; Low middle: 211; Middle: 342; Up: 56. A further indication of status and self-perceived status was provided by the question about where participants would consider themselves standing by comparison with the average population, yielding 201 reporting they were standing below average, 818 at the average and 402 above average.

We also asked about the degree of religious practice among our participants, without asking which religion was practiced. To ensure a sufficient number of religious respondents, we posted a link to our questionnaire on various appropriate fora: 416 declared to be religious, 282 reported themselves as being in an intermediate situation, meaning essentially they hold some creeds which are not accompanied by regular or even occasional practice, and 599 declared they were not religious. Finally, we asked about the degree to which they felt personally affected by the current crisis a great deal: 206; somewhat: 523; slightly: 411; not at all: 281.

## Results

### *A. Overview of indices*

Our first task involved devising scales summarizing the answers on thematic grounds. For each scale we asked several questions, and we ran item-reliability analysis to identify the items that should be retained. Appendix 1 provides the full description of the scales and their reliability (Cronbach Alpha). Indices were derived by averaging the answers in each scale, reverse coding as necessary. The indices were built upon independent, non-overlapping sets of questions and captured the way our participants attributed relative weights to the following dimensions as possible explanations of the crisis: Capitalism & globalization, morality, media, lack of supervision, because the economy runs as a cycle, the belief that the economic world is complex and therefore hard to control, a belief that is best not to intervene and let the crisis right itself, stupidity of financial decision-makers, expressed belief in the competence of professional economist, and a belief that something good may eventually come out of the crisis. Error! Reference source not found. summarizes the degree of support for these indices.

Insert Figure 1 here

In presenting the data, we will proceed in top-down fashion. First, we will present the findings of a cluster analysis, which regroups correlated indices, in accordance with the tendency of informants to provide similar responses to the different indices. In the next section, we use Principal Component Analysis to identify the main factors underlying responses, and use this organization to structure the discussion of the individual indices. Finally, we will report on demographic variables that were found to affect the values of the indices.

## *B. Indices and their Structure*

### *1. Hierarchical Cluster Analysis*

Cluster analysis implies two parameters: the definition of distance between items (here, the indices), and the clustering method. We used the most common definition of distance, namely, the geometric distance between them in the multidimensional space spanned by the participants. Clustering was performed according to Ward's method. This method is a kind of reverse analysis of variance, and attempts to minimize the sum of squares of any two clusters that can be formed at each step. (StatSoft, Inc., 2009).

The meaning of clustering, with this method, is readily intelligible. This procedure lead to a tree that in our case clearly groups the indices in two distinct clusters (see Figure 2Error! Reference source not found.).

Insert Figure 2 here

We submit that the most general cognitive divide within the lay representation of the financial crisis may be expressed in terms of whether it is perceived as a systemic, global, unintended phenomenon or as a local, individually and intentionally motivated one. Specific indices were tailored to capture more specific psychological carvings of the phenomenon, but the major divide is clear. On the one side, the intentional bias is found, through the correlation of responses on indices such as the lack of morality of particular agents in the system, their alleged stupidity, the lack of intervention by some regulatory instances. On the other side of the divide are systemic features such as the complexity of financial mechanisms or the cyclicity of crises, and are also linked with the tendency to attribute competence to economists.

Returning to Figure 1, we may notice that support for the indices occurring on the "individual" branch is higher than that for the "systemic" one: People, it seems, are more inclined to attribute intentional explanations than systemic ones. This tendency may be seen as an expression of the common cognitive bias consisting in judging all actions as being intentional rather than due to chance or as being simply causally determined (Kelemen and Rosset, 2009; Rosset 2008).

Capitalism & globalization side with moral and intentional attributions rather than with the tendency to acknowledge the complexity and other structural aspects of economic phenomena. While this paper does not deal with cultural differences, we note here that in the US, and only there, is there a positive appraisal of capitalism as a system uncorrelated with the endorsement of moral flaws as a prime cause of the crisis. We suspect therefore that "capitalism" and "globalization" do not contribute a cognitively sophisticated analysis of the crisis but seem at first blush to function as negative moral tags. Indices perceived as referring to systemic features, such as Complexity, Cyclicity, Optimism forecast, No Intervention and



Economists, indicate a potential property of resilience of the system, pointing to some latent or emergent mechanisms.

## 2. *Factor Analysis*

A factorial analysis (PCA) of the indices identified three underlying factors (see Table 1), and estimated their relative influence in shaping the public perception of the crisis.

Insert Table 1 here

### *Factor 1: Human frailty*

Factor 1 accounts for 28% of the variance. It regroups the five following indices: Morality, Stupidity, Lack of supervision, Capitalism & globalization and Complexity. A notion underlying these otherwise varied indices is that of human failure, either positively, in that typical human weaknesses provoked the crisis, or negatively, in the sense that human effort might have averted it. Positive human weakness itself comes in two guises: moral or intellectual. Moral flaws (q24), greed (q53), deliberate actions by people motivated by vested interests (q51) typically shape the moral apprehension of the financial crisis, which may itself be seen as a deserved retribution of misbehavior (q25).

The same index also covers the complementary traits of the public: While clever people were manipulating the economic system to suit their ends, others were led astray and participated blindly. The Stupidity index points to the short-sightedness (q23) and lack of professionalism of financial actors (q22), as well as the possibility that herd behavior may be responsible (q23). Immorality may be an aspect of short-sightedness and the attribution of moral flaws can to some extent be seen as converging with the attribution of intellectual ones. Morality and Stupidity indices may conflate at another level with the Complexity index, as the latter stresses the uncontrollability of the crisis. Had experts wanted to preserve the world from such a predicament, they might not have been able to do so, given the lack of control over the complexities of the economic and financial system. The surface differences between indices does not threaten the coherence of factor 1: decision-makers lack a clear understanding of the phenomenon (q55) which is also consistent with one further index, the role of Lack of Supervision in provoking the crisis.

Lack of Supervision can indeed be seen primarily as suggesting a different kind of moral flaw, namely negligence and offhandedness, or even deliberate immorality as in producing false reports of financial activities (q52). However, it may also be related to the view that the mechanisms that were not held in check by regulatory systems generated the uncontrollable spinoff of the crisis (q49). Interestingly, then, the Lack of Supervision index combines in a mutually reinforcing way “moral” and “mechanical” explanations of the crisis. One component question of the index, q27, is emblematic of this combination by suggesting that speculation (which may be perceived as a moral failure) is enough to bring down the economy, in a way that remains opaque and far from understandable for most participants.

Two other indices are loaded on factor 1: Capitalism & globalization, and Complexity. In the composition of the factor they score at a lesser level than the already mentioned indices, respectively 0.6 and 0.65 vs. 0.75 and 0.8. By contrast with the explicit or implicit intentional elements characterizing those previous indices, Capitalism and Complexity seem to hint at what we called negative human failures, rather than positive ones, acts of omission rather than of commission. Unintended consequences are what is primarily at stake in those indices, as the Complexity index suggests that the crisis is intelligible and understood but uncontrollable (q29), that economics is so complex that matters, after they reach a certain threshold, take on a life of their own (q30), and that experts could not have predicted the crisis (q38) or prevented it (q39). In sum the system can spin out of control (q54) and decision-makers eventually lose their understanding of what happens (q55). Complexity, by default, implies human failure in the sense of the incapacity of dealing with a complex emerging phenomenon. On the other hand, one can argue that complexity, by generating progressive lack of control and intelligibility, entails opacity, lack of transparency, which in turn encourages moral deviations. In that sense, complexity could play a significant underlying explanatory role in structuring this major factor 1.

To some extent, the same remarks carry over to the Capitalism & globalization index which only included two questions, on the contribution of capitalism to the advent of the crisis (q18), and on whether we could consider that globalization was the culprit, in the sense that a local problem turned into a global one (q46). Again, no positive human failure seems to be involved in these explanatory parameters, but capitalism

plausibly provides an implicit benchmark in view of the moral evaluation of its own distortions. We suggest therefore that in the public ethos capitalism as a system is not fully dissociated from moral questions and that this index converges with an overall interpretation of factor 1 in terms of an entangled combination of positive and negative failures both fostered by and fostering the uncontrollability of a pathological economic system.

*Factor 2: Systemic resilience*

Factor 2 loads up to explain 15% of the variance. It is based upon three indices: Cyclicity, Optimistic forecast and considerations about Economists. The logic of this grouping distinguishes it clearly from the previous factor. Factor 1 relates to explicit or implicit human moral influences on the unfolding of recent economic events, whereas factor 2 expresses the perception of a sort of autonomous life of the economy and business cycles, on which wrong or noble human intents would have in any case little influence. The Cyclicity index precisely means that the economy has its own logic. Suggesting that the economy is a cycle, without further specification, as q26 does, precludes any attempt at intervening or deeply investigating the causes of the crisis. Incidentally, cyclicity does not imply the false recognition of a law of eternal return of the same. When asked whether the most salient event in the modern history of financial crises, the 1929's downfall of Western economies, is comparable to the current events (q28), responses did not correlate positively with q26 ( $r = -0.08$ ).

A low level of efforts at diagnosing and predicting how the current crisis will play out is a rational attitude given its perceived independence with respect to such efforts. But it is also compatible with more positive attitudes such as optimism and trust in the competence of economists, as a profession. Cyclicity means that good and bad periods alternate. Optimistic forecast is then coherent with Cyclicity, as we observe that most people who think that the crisis is a cyclical phenomenon also think that the economy will come out stronger from the crisis (q36) and that moral standards in business will improve (q37). In the same vein, there is no need to question the competence of economists, who in theory have all the required qualifications to manage things (q42), to estimate the duration of the crisis (q43), and to predict how events will evolve (q44). This is particularly coherent with the contention that crises are cyclical,

*Factor 3: Intervention*

The major difference between factors 1 and 2 lies in the tendency to explain the crisis in terms of moral flaws or of a quasi-natural order of things. The focus is different with the single No Intervention Index making up factor 3 and explaining about 12% of the variance. Here “no intervention” is framed as a desirable feature, not as a side-effect of human failure or inaccessible economic laws. When intervention is perceived as unnecessary (q31) it correlates with the more accentuated point that by avoiding intervention we allow banks to go into bankruptcy, instilling in the banking system a better sense of their responsibilities in the future (q33). Answers on those questions further correlate (with reversed polarity) with items q32 and q34 in our questionnaire, which respectively state that governmental intervention is vital to solve the crisis and that we should support the banks in trouble because their demise would worsen a crisis from which all will suffer. One can see, however, that even if the specificity of this factor is that no-intervention is viewed positively, the explanations of why this is the case may evoke the moral and retributive considerations seen in the Morality index.

This single index based factor 3 reveals an anti-interventionist tendency inside our sample. It will be interesting to know who shows this tendency. Given the isolated character of this factor, and given that it does not collapse, under our factorial analysis, with the two previous factors, despite partial thematic overlap, one is particularly tempted to find the sources of this tendency. State-interventionism is presumably a nation-dependent factor and may also strongly depend on social and economic status. These high levels of dependence on specific national parameters may explain why No Intervention shows up as an isolated factor in our data analysis.

Insert Figure 3 here

*A further index: the role of the media.*

Our questionnaire contained further indices which did not clearly load on the factors but showed interesting correlations with other indices and items in the questionnaire. Our two questions bearing on

the role of media correlated with the Stupidity index ( $p=0.63$ ) and with another question about Conspiracy. The two questions about the media (q19 and q48) were quite unspecific, as they respectively investigated the perceived role of media in general, and the alleged influence of the way the media presented the situation. It is therefore interesting to understand the correlations between responses on these questions and on those about stupidity and conspiracy as indicative of a common perception of the contribution of the media to the crisis. In particular Media has a 0.35 correlation with Conspiracy.

### *C. Individual Indices*

As was seen from Figure 1Error! Reference source not found., the "No intervention" index received the lowest level of support. Refraining from intervention is not acceptable to the public. Important causes of the crisis are considered to be the lack of supervision, stupidity, and a flawed morality, pointing in general to a deliberate attitude on the part of some agents who are supposedly in charge of or involved in the situation. The competence of economists also gets a fairly low score, which is consistent with the low score of the no-intervention index. The public does not seem to be convinced that economists would know how to handle the crisis.

Two observations can be made in this contextError! Reference source not found.. First, as already mentioned when sketching the conceptual dividing lines between the three main explanatory factors that we isolated through factor analysis, most people appear to construe an intentional, especially moral, reading of the crisis rather than conceive of it in terms of independent causal mechanisms. Purposiveness, be it under the guise of an intelligent design in nature or that of the secret interests of a vaguely identified group of businessmen, is the default explanation which seems to satisfy a primitive need for closure, and which takes effort and time to inhibit. The same idea is expressed through the strikingly high score of the Conspiracy index. We should expect, by consequence, a modulation of this kind of spontaneous explanation by the independent variable of religiousness, and, presumably in the opposite direction, by the level of training in economics, a point to which we return presently.

Another general observation about these results may be of interest to economists. The intentionality bias, which puts morally negative intents at the source of the financial crisis, is curiously not associated with a

more positive illusion of control in view of restoring a normal course of events. There are at least two ways of interpreting this dissociation. One could note that the intentionality bias is habitually stronger when envisioning negatively framed events than when the same events are seen through a positive lens (see Knobe 2003). This would explain why the widespread belief in sinister intents as laying at the root of the crisis is not correlated with faith in the capacity of economists to solve it. But the second lesson one could draw from this dissociation is that economists are not associated with those wrong intentions. They are generally endowed by the public with expertise and significant competence, and we should resort to their services to the extent that they are able to understand the crisis, probe its causes (even though presumably the probed causes would reveal economic laws rather instead of moral noirceur). However this vaulted status of expert will not, in the eyes of the public, translate into efficacy.

A seeming paradox may be underlined at this juncture. Through the media, people are exposed on a daily basis to a self-labeled expert discourse on the economy and, for the past two years, the financial crisis. Most notions and arguments used through these routine strings of discourse may not be fully understood by the lay listener. Lay causal reasoning in economics is most often shallow, and isolated elementary chains of causes coexist mentally (see Leiser and Aroch, 2009). This causal reasoning capacity may be hindered, as we have seen, by the prevailing tendency to approach poorly understood mechanisms in terms of morality and human agency. But a possible outcome, which involves a certain amount of cognitive dissonance, is that the proper understanding of the causal mechanisms is deferred to some experts, leading to the paradoxical position of accepting for oneself explanations that one knows would be refuted by some better informed and more competent others. The paradox of cognitive deference of technical explanations and non-technical moralization of the same phenomena could be partly explained by the ambiguous perception of the media entertained by the public. They are seen at the same time as the main instruments of cognitive deference, through the publicizing of an ambient expert discourse, and as a cause of the crisis, because of the way they have presented events. Furthermore the perception of the media as one of the causes of the crisis correlates with conspiracy explanations.

#### *D. How independent variables influence indices*

A main intent of our study was to understand on what aspects of the perception of the crisis certain important socio-economic factors we elicited had an impact. We tried to make sense of the main conceptual divides in the individual scores as well as in the clustering of those indices. The question is now to observe how this mean lay representation is modulated by social and economic status, background training in economics, and the extent to which one is personally affected by the crisis. Specific attention will also be paid to religion and its impact on the tendency to emphasize moral factors in the explanation of the crisis, and on identifying the typical conspiracy theory in the economic and financial realm.

##### *1. Socio economic status*

Changes or differences in socio-economic status (SES) presumably affect perception of a socio-economic problem (Vergès, 1989, Savadori et al., 2001). Here we discuss the influence of the self-perception of status (participants were invited to locate themselves below, at, or above what they conceive to be the average socio-economic status) on our various indices.

Insert Figure 4 here

We observe<sup>1</sup> a marked effect of SES on several indices: Capitalism & globalization, Stupidity, Morality, Media, Lack of Supervision and No Intervention. The higher the SES the less those indices were deemed important. The reverse effect can be noted on the Optimism Forecast index.

The latter effect may be surprising since it points that the higher the social status the less optimistic one is about the eventual issue of the crisis. It has been documented in different contexts, in particular in connection with health, that SES had a graded relationship with optimistic attitudes. Robb and her colleagues (Robb et al. 2009) have recently assessed the relationship between SES and optimism in a representative sample of British older adults on a Life Orientation Test Questionnaire which generates

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<sup>1</sup> All the data we present were confirmed by Anova with  $p < .001$  or lower.

positive (optimism) and negative (pessimism) scores. Their results show that lower SES is associated with the forecast of the future as containing more negative events, but that SES made little difference for positive events. How can higher SES provoke a more pessimistic appraisal of the financial crisis than lower SES does? A plausible hypothesis is that our index neither captured a fundamental life-attitude nor a consideration of personal events, contrary to the questions raised by Robb's studies involving among other things health affairs. Low SES participants tend to moralize and blame supposedly influential agents for their stupidity more often than do their more fortunate counterparts. We have discussed above the general human bias in favor of a moral intentional interpretation over a causal mechanistic one, when the latter is in principle available. Why should lower socio-economic status individuals display this bias to a greater extent?

Lower SES participants regret a lack of supervision and would have wished more intervention from the State, which is consistent with their blaming Capitalism & globalization for generating and spreading the crisis, as they most likely see globalization as a process which individual states do not control. This bears a potential implication for policy-makers who have to choose the proper public discourse to address to that population. Correlations have been observed between financial myopia, short-sighted economic behavior in the form of hyperbolic discounting, and lower economic status (Mullainathan 2005). By pleading for more intervention from institutions and blaming their alleged lack of supervision over the course of events, by pointing to the irrationality and short-sightedness of financial actors – whether legitimate or not – they express a wish for a policy that would constrain them towards less short-sighted behavior, although they do not see themselves, of course, as being the primary target of this policy. This is potentially a good case for the position known today as soft or “libertarian paternalism” whose twin requirements are to nudge imperfectly rational individuals toward rational behavior without exerting moral pressure on them, and change nothing to the autonomy of rational agents (Thaler and Sunstein 2003).



## 2. *Training in economics*

A formal background in economics tends to reduce the importance lent to the Capitalism, Morality, Conspiracy, and the No Intervention indices. By contrast, it gives more weight to systemic features such as Cyclicity, and, as could be expected, to the competence attributed to Economists. These results should be read in light of studies that were run on the attitudes and understanding of economists or students in economics of economic issues. It has been a staple of these studies to assert that economists are more selfish, or free ride in a greater proportion than the rest of the population (e.g. Carter et al. 1991, Frank et al. 1996, Yezer et al. 1996). The idea is that such behavior is due to economic training: exposition to standard models of rationality is supposed to produce self-centered behavior. Later studies have questioned this hypothesis and showed no effect of economic training on the variation of pro-social preferences (Frey and Meier 2005), nor was the hypothesis that less pro-social individuals are over-represented in economics curricula confirmed (Ali, 2008).

Insert Figure 5 here

Some reverse tendency can even be observed and help interpret our results. Haucap and Just (2003) examined students' attitudes towards various allocation mechanisms for a scarce resource by contrasting a group enrolled in a course of economics and another group in another curriculum. They found that significantly more students enrolled in economics courses judged price increases as fair than other students. This tendency was increased the more training in economics the students received. It appears that a deeper understanding of economic mechanisms makes people accept the rightness of those mechanisms, and, when they are disrupted, a higher level of confidence in future recovering is shown. Whaples had also shown that after an introductory economics class, a greater percentage of students come to regard the price-setting mechanisms of the market as fair (Whaples 1995). This result was confirmed when students were replaced by professors and was independent of the latter's ideological affiliations. Differences between the public and professional economists have been noted. (Blendon et al., 1997) report the results of two surveys, one of economists, one of the public, and find that the public has a

bleaker picture of what has happened economically to the average family, and is more pessimistic than most economists about the intermediate future.

Further explanations may be proposed. Informal education gained through the daily acquisition of financial skills confers practical and intellectual autonomy and reactivity in individuals, and makes them less prone to blame putative malevolent agents for systemic dysfunctions. One could distinguish between skills and formal education or pure economic and financial literacy. The founder of human capital theory, T.W. Schultz, insisted on an aspect of human capital theory which he labeled “allocative ability” (Schultz 1975) which consists in the ability to perceive, interpret and reallocate their resources, especially at times when economic changes or turmoil undermines established heuristics and behavioral routines. Schultz raised the central question as to whether these allocative abilities are gained through education and experience. Robert Willis in the University of Michigan has recently led a study in order to disentangle cognitive abilities and financial ability, using the current economic crisis as a natural experiment (Willis 2009). One of his conclusions is that although reactive financial skills or fluid intelligence may not be affected by the current crisis, long-term acquired intelligence of the economic situation, stemming from formal education, may experience a significant change as a result of recent financial events. Informed people may be led to doubt even basic facts and principles, while untrained individuals will confidently emit judgments on what’s wrong in the system. The absence of cognitive deference towards economists among less formally trained individuals may simply be interpreted as a side-effect of their lesser metacognitive ability to change mindset in the face of new events, rather than as an effect of the way they personally suffered from the crisis.

Lacking formal training, individuals tend to fall back on a mix of heterogeneous factors (morality, stupidity, lack of state regulation). It is striking that more trained individuals do not give much weight to this group of parameters and overall give positive answers to fewer items in the questionnaire. This is an indirect indication of the greater heterogeneity and holistic character of naïve approaches to natural and social phenomena. In a similar spirit, Leiser and Beth haLachmi (2006) showed that moral and economic considerations are not dissociated among young children, and differentiate only progressively.

### 3. *Affected by the crisis or not?*

Insert Figure 6 here

Increased personally felt consequences of the crisis modulate a significant sub-part of the indices and does so in the same way as did decreasing SES for several key indicators: (Morality, Stupidity and the Lack of Supervision). Participants who were personally affected by the crisis tended to see it as a moral problem and as a complex, hard to understand phenomenon. This seems to go against the general tendency of moralization as a simplification process of a complex, causal and amoral reality. We raised earlier that issue: Morality and Complexity indices may jointly point to a converging effect of human and systemic failure. “Complexity” may be a way of saying that the system lives a life of its own which ought, in accordance with lay normative principles, be regulated and better supervised, and would be if decision-makers happened to be more competent and moral. How does this set of indices, morality, complexity and the regret that things were not sufficiently supervised, relate to the degree one feels affected by the crisis?

One way of making sense of this relation is to suppose that it is fostered by an emotional stance towards economic and financial environments. Uncertainty triggers behaviors that deviate from normative standards of rationality and generates substitutive emotional heuristics. We need not refer to recent behavioral experiments to illustrate the point but, more fundamentally, to Keynes’s theory that emotions are unavoidable in assessing economic environments due to their basic uncertainty (Keynes [1921] 1973). We can wonder whether the more some emotion, or sense of being affected, is felt by an individual the more she will tend to perceive her economic and financial environment as clothed in a high level of complexity and uncertainty, i.e. inaccessible information about the future course of events. This goes with a plea for reassurance in the form of an increased role of regulatory intervention [systems/mechanisms], as well as with a more acute sense of moral depravation among decision-makers, as decreased confidence in the future may be correlated with a perceived breach of trust by economic institutions.

A recent study by Roland-Levy confirms in its way the “Keynesian” reading of the modulation of morality, complexity and the call for better regulation by those personally feeling the impact of the crisis.

It found that financial behavior and understanding of credit and savings were differentially influenced by levels of concern and the worry people actually experienced with respect to the current financial crisis (Roland-Levy, this volume)

#### 4. *Religion*

Insert Figure 7 here

We may observe (Error! Reference source not found.) effects of Religion on Morality (the more religious, the more important morality is deemed to be), on Cyclicity (the more religious, the more economics is cyclical), trust economists, affirm the need for Intervention, view the economic world as complex and perhaps cyclic, are optimistic that lessons will be learned, and believe somewhat more than others in Conspiracy. Generally speaking, it appears that religious people hold the same conceptions as others, but more emphatically.

A salient plausible prediction was that more religious people would tend to consider the crisis as a negative retribution (q25), administered through some particular embodiment of immanent justice. The impact of the degree of religiousness on scores on this item turned out to be far weaker than would be expected, and quite low for all groups : Religious: 2.91; Traditional: 2.91; non-religious: 2.54, [Anova  $p=.00007$ ]. Religious individuals accept the concept of retribution in the sense that they make a larger positive use of it in their explanations of the crisis than do the non-religious, but even religious people do not overuse this notion of the crisis as a retribution for misconduct to any great extent.

Since Max Weber's seminal work on the relationship between Calvinism and capitalism, there has been a constant debate on the impact of religion on people's economic attitudes. That impact has been measured for an array of economic attitudes – e.g. toward cooperation, the role of government, working women, or the market economy (see Guiso et al. 2004) – but not hitherto on the financial crisis. One can see religion, and more generally culture, as a source of more or less explicit constraints that guide our daily social and economic interactions. The importance of those constraints can be observed from the fact that the same formal rules, be they constitutions in the political realm or commercial laws in the economy, imposed on societies with different cultural background produce different outcomes. If globalization is a unifying

process in terms of the homogeneity of market-mechanisms and tends to spread across countries in spite of their various cultural identities, it will be interesting to examine, in a Weberian spirit, whether there are cross-national attitudinal differences, due to distinct prevailing religions in the different countries where our questionnaire was publicized. This will be addressed in a forthcoming paper.

### 5. *A focus on conspiracy*

Insert Figure 8 here

Who broods over conspiracy views about the economy? Typically those affected by the crisis and of lower socio-economic status. The two dimensions interact non-additively, so that the impact of SES only materializes for those who suffer from the crisis to a significant extent. This matches what we know from the scant literature on conspiracy. Thus, Goertzel (1994) found that belief in conspiracies was correlated with anomia, and insecurity about employment. Wagner-Egger and Bangerter (2007) found that the main predictors of belief in conspiracy theories are anxiety and lack of trust in the institutions. Belief in conspiracy is notoriously immune to disconfirmation (Clarke, 2002; Douglas and Sutton, 2008; McHoskey, 1995) and its function therefore appears to be emotional, attributing blame, rather than cognitive, trying to understand the world.

### Conclusions

Our data document a major cognitive/affective divide between moral/intentional views about the origins of the crisis, and seeing the economy as a complex impersonal system that malfunctioned, a distinction reminiscent of that made by Sevón and Weckström (1989; see also Elster, 1985) who presented two conceptions of how the national economy works, seeing it as a "happy family" vs. taking an instrumental perspective. According to the former, economic actors care for one another, factories are created to fulfill existing needs for products, and the government is responsible for making everything work smoothly. The instrumental conception conceives of the economy as a complex, objective and soulless mechanism, with which individuals attempt to interact the best they can. Regarding the crisis,

The temptation to personify objective causal mechanisms is a cognitive bias modulated by several independent variables. Socio-economic status and a low educational level in economics favor a moral reading of the recent economic events and a rejection of the system through some of its gross characterizations like “capitalism” and “globalization”. For those people, Madoff --whose Ponzi scheme was unveiled by but did not cause the crisis-- became emblematic of the greed and absence of scruples that caused it.

People situated in a higher position on the social and educational scales develop a more impersonal and systemic, if not analytical, reading of the causes of the financial crisis. They also entertain a more confident view about the future of the economy. In particular those who received formal training in economics are more optimistic about the future and confident in the capacity of the system to mend itself. People lower in the SES scale and with less economic training are less sanguine about these prospects. Religion makes us optimistic and induces us to believe in cycles too, but also in fundamental moral forces driving economic events. As might have been expected, personally experiencing the brunt of the crisis shapes the perception one has of that event. When combined with a low socio-economic status, feeling personally affected by the crisis favors the emergence of conspiracy views about the economy, those being an extreme form of the moral and intentional perspective on the functioning of the economy. Despite these influences, the moral/intentional conception is stronger than the systemic one. These findings have important consequences for economists concerned with managing the crisis. For a large part of the public, the issue is indeed a matter of trust: in the integrity and sense of responsibility of the actors entrusted with steering the economy out of its troubles. They do not clamor for revolutionary structural change, on the ground that the internal contradictions of the system are destroying it. They do expect decency and heed on the part of the economic leadership. To restore trust, the public must be satisfied that steps are taken to ensure this.

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## Appendix – Indices

Capitalism & globalization (Cronbach Alpha: 0.4532)

Q18 – In your opinion, to what extent did the capitalistic system contribute to the crisis?

Q46 – In your opinion, to what extent is the following factor responsible for the crisis: Globalization caused the crisis, which went from a local issue to a world-wide crisis?

Morality (Cronbach Alpha: 0.6829)

Q24 - In your opinion, to what extent did Moral flaws (greed, lack of compassion, selfishness) contribute to the crisis?

Q25 - Please indicate to what extent you agree or disagree with the following statement: The current crisis comes as a punishment to all those who misbehaved in the past few years.

Q51 - In your opinion, to what extent is the following factor responsible for the crisis: The deliberate actions of vested interest?

Q53 - In your opinion, to what extent is the following factor responsible for the crisis: The greed of key economic players?

Media (Cronbach Alpha: 0.852)

Q19 – In your opinion, to what extent did the media contribute to the crisis?

Q48 - In your opinion, to what extent is the following factor responsible for the crisis: The media and the way it presented the situation?

Stupidity (Cronbach Alpha: 0.7446)

Q20 - In your opinion, to what extent did stupidity and unprofessionalism contribute to the crisis?

Q22 - In your opinion, to what extent did herd-like behavior, everyone mindlessly behaving like the others, contribute to the crisis?

Q23 - In your opinion, to what extent did Short-sightedness - decision were made without thinking about the more distant future contribute to the crisis?

Q47 - In your opinion, to what extent is the following factor responsible for the crisis: The stupidity of the decision makers?

Q56 - In your opinion, to what extent is the following factor responsible for the crisis: The lack of professionalism of the decision makers?

Lack supervision (Cronbach Alpha: 0.628)

Q21 - In your opinion, to what extent did lack of regulation contribute to the crisis?

Q27 - Please indicate to what extent you agree or disagree with the following statement: Speculation and financial creativity were allowed to become too influential, and are now bringing down the whole economy.

Q49 - In your opinion, to what extent is the following factor responsible for the crisis: The irresponsible attitude of the state?

Q50 - In your opinion, to what extent is the following factor responsible for the crisis: The banks that encouraged people to take unreasonable loans?

Q52 - In your opinion, to what extent is the following factor responsible for the crisis: False reporting by big organizations and institutions?

Cyclicality (n.a. - single question)

Q26 - Please indicate to what extent you agree or disagree with the following statement: The current crisis is part of the cyclic behavior of the economy and is not unusual.

Complexity (Cronbach Alpha: 0.5551)

Q29 - Please indicate to what extent you agree or disagree with the following statement: The crisis is well understood, but has become uncontrollable.

Q30 - Please indicate to what extent you agree or disagree with the following statement: The economy is a complex system, and once certain point is reached things will get worse for a long period.

Q38 - Please mark the extent to which you agree or disagree with the statement: No one could have predicted the crisis, due to the complexity of the economy.

Q39 - Please mark the extent to which you agree or disagree with the statement: No one could have prevented the crisis, due to the complexity of the economic system.

Q54 - In your opinion, to what is the following factor responsible for the crisis: The entire economic machine that went out of control?

Q55 - In your opinion, to what extent is the following factor responsible for the crisis: The lack of understanding by the decision makers?

No intervention (Cronbach Alpha: 0.7099)

Q31 - Please indicate to what extent you agree or disagree with the following statement: The economy can handle the crisis, and external intervention is unnecessary.

Q32 - Please indicate to what extent you agree or disagree with the following statement: Governmental intervention is vital to solve the crisis.

Q33 - Please indicate to what extent you agree or disagree with the following statement: Banks should be allowed to go into bankruptcy so that they will conduct themselves more responsibly in the future.

Q34 - Please indicate to what extent you agree or disagree with the following statement: We should support banks in trouble because their fall would provoke a crisis from which all will suffer.

Economists (Cronbach Alpha: 0.7)

Q42 - Please mark the extent to which you agree or disagree with the statement: Economic experts understand the crisis well enough to deal with it.

Q43 - Please mark the extent to which you agree or disagree with the statement: The duration of the crisis can be estimated.

Q44 - Please mark the extent to which you agree or disagree with the statement: The evolution of the crisis is predictable.

Q45 - Please mark the extent to which you agree or disagree with the statement: It is possible for experts to fully understand the crisis.

Optimism forecast (Cronbach Alpha: 0.4936)

Q36 - Please indicate to what extent you agree or disagree with the following statement: The economy will come out stronger from the crisis.

Q37 - Please indicate to what extent you agree or disagree with the following statement: As a result of the crisis, moral standards in business and finance will improve.

Conspiracy (Cronbach Alpha: 0.5740 )

Q40 - Please mark the extent to which you agree or disagree with the statement: They could have prevented the crisis, had they but wanted to.

In computing the conspiracy index, we used Q40 together with Q51 and Q52. The latter two occur also in the composition of different indices, hence the separate treatment accorded to the conspiracy index in the paper.

Other question

Q28 - Please indicate to what extent you agree or disagree with the following statement: The current crisis is more serious than the Great Depression of 1929.

### Author Note

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Figure 1

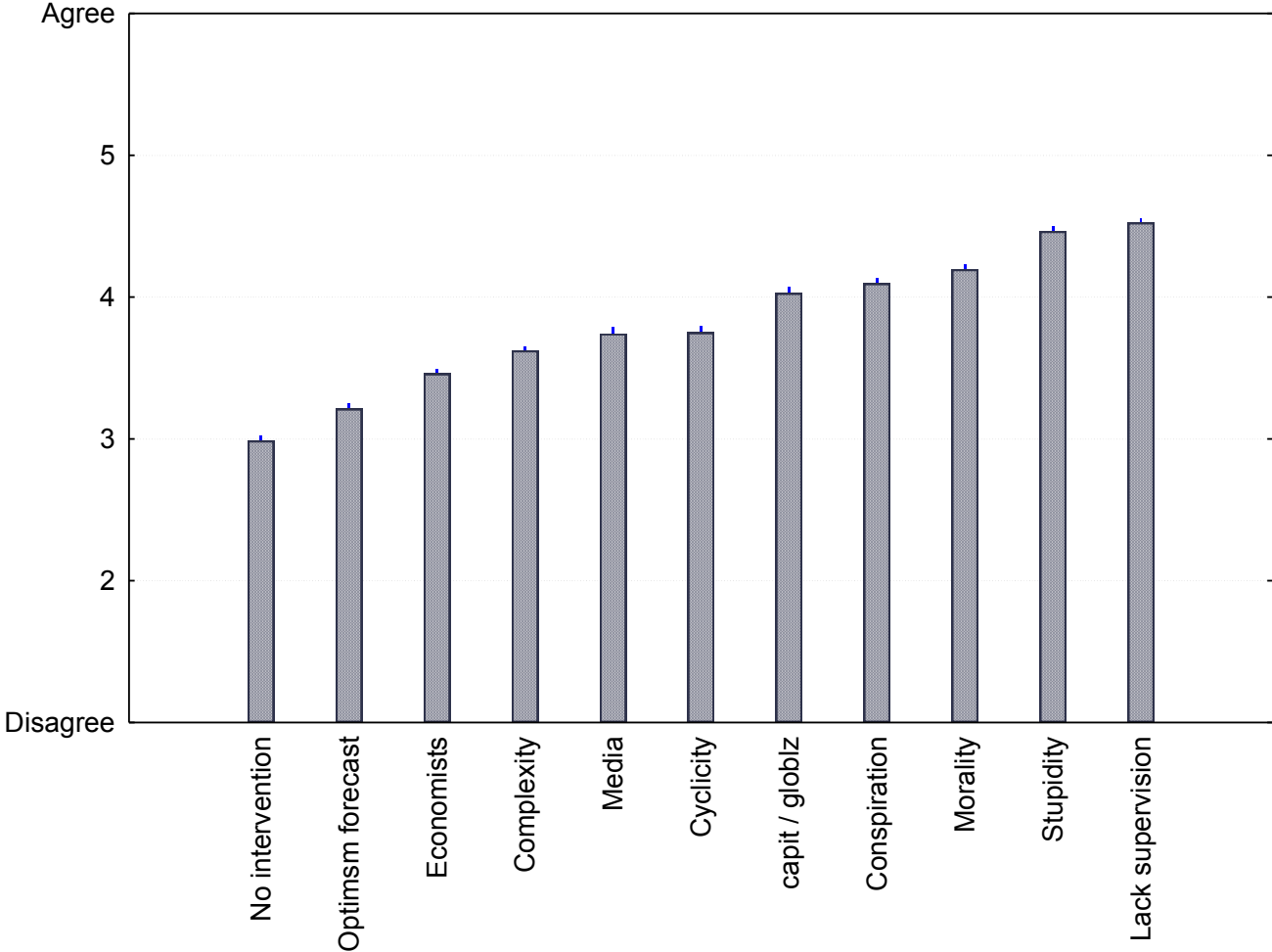


Figure 2

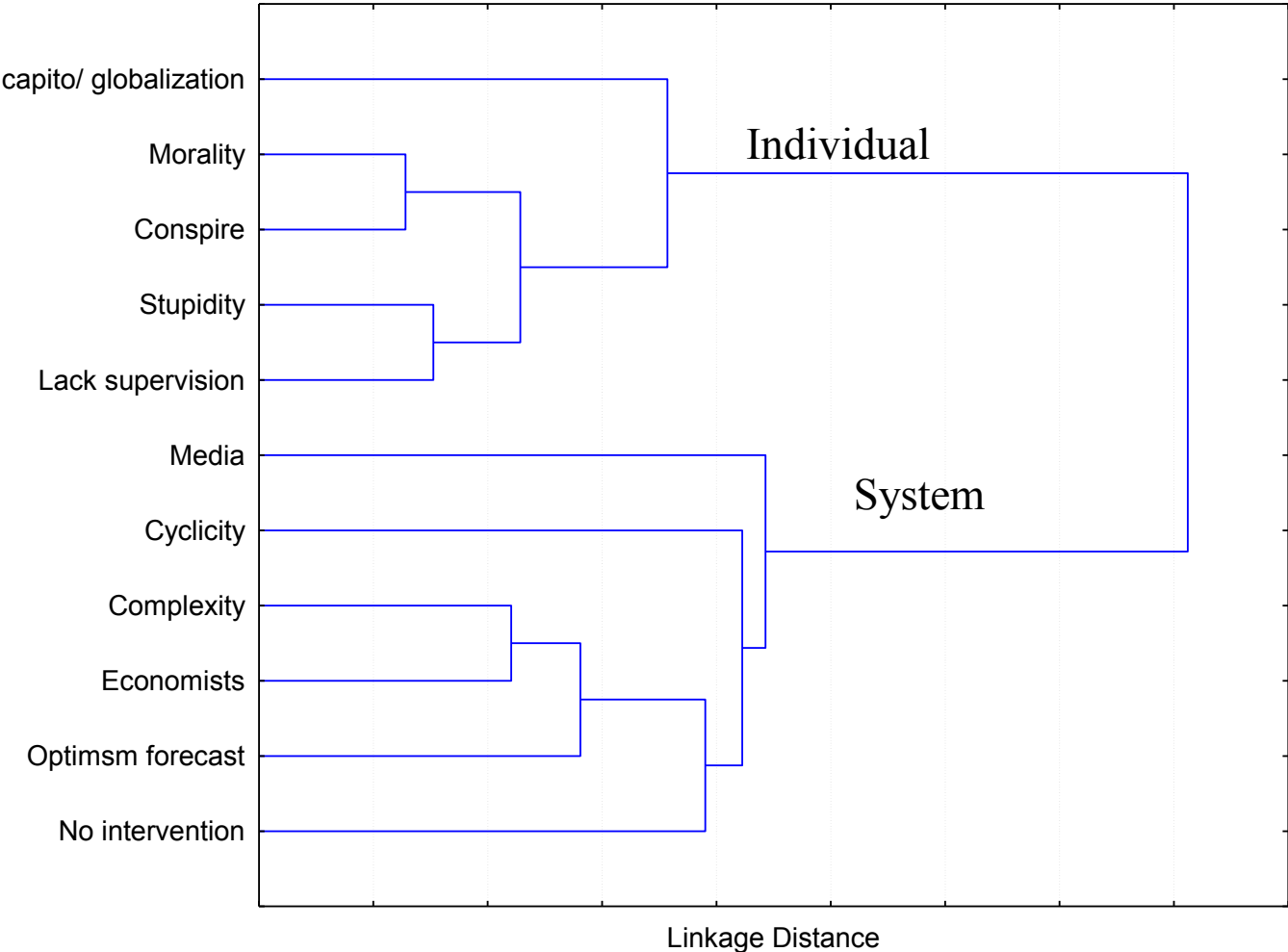




Figure 3

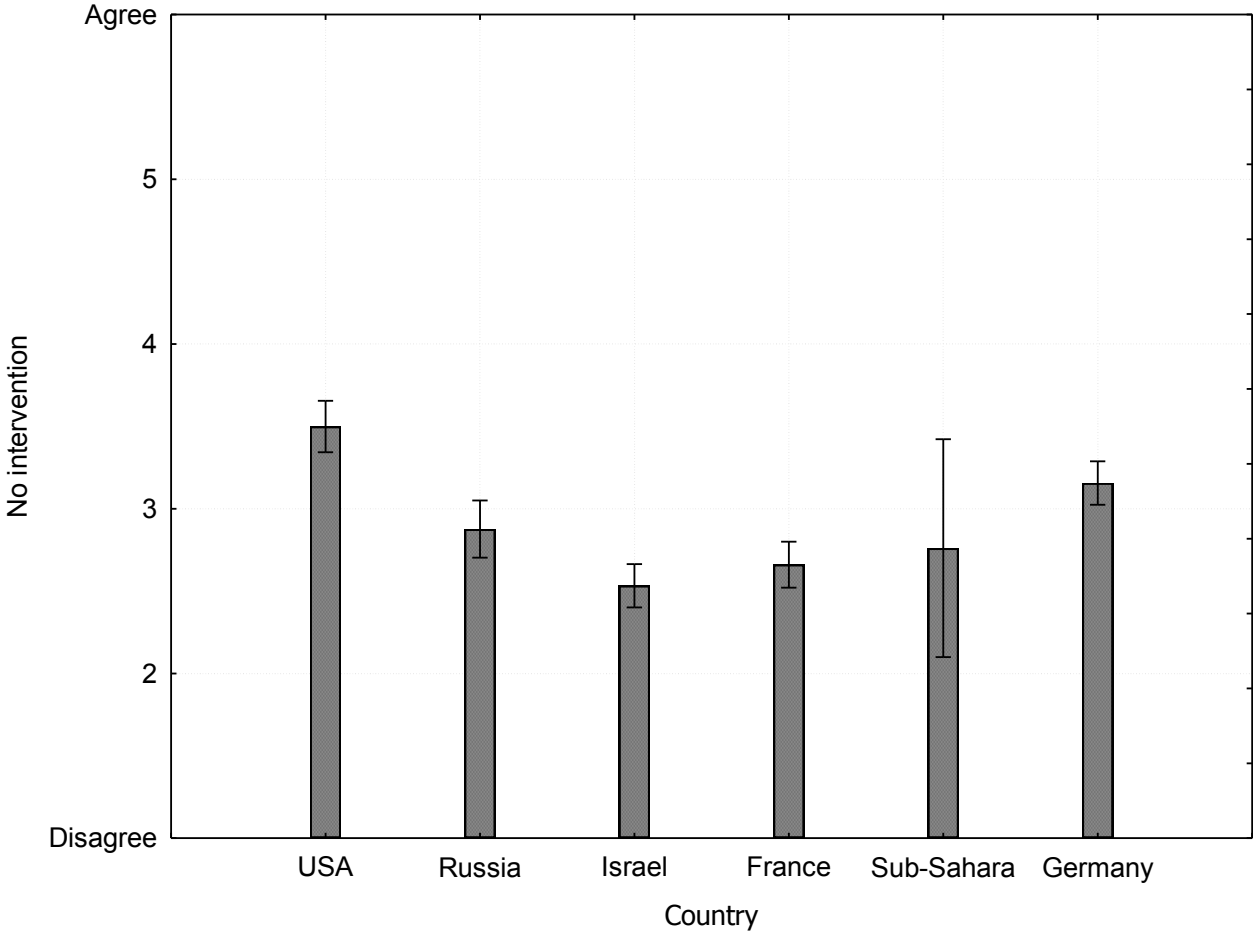


Figure 4

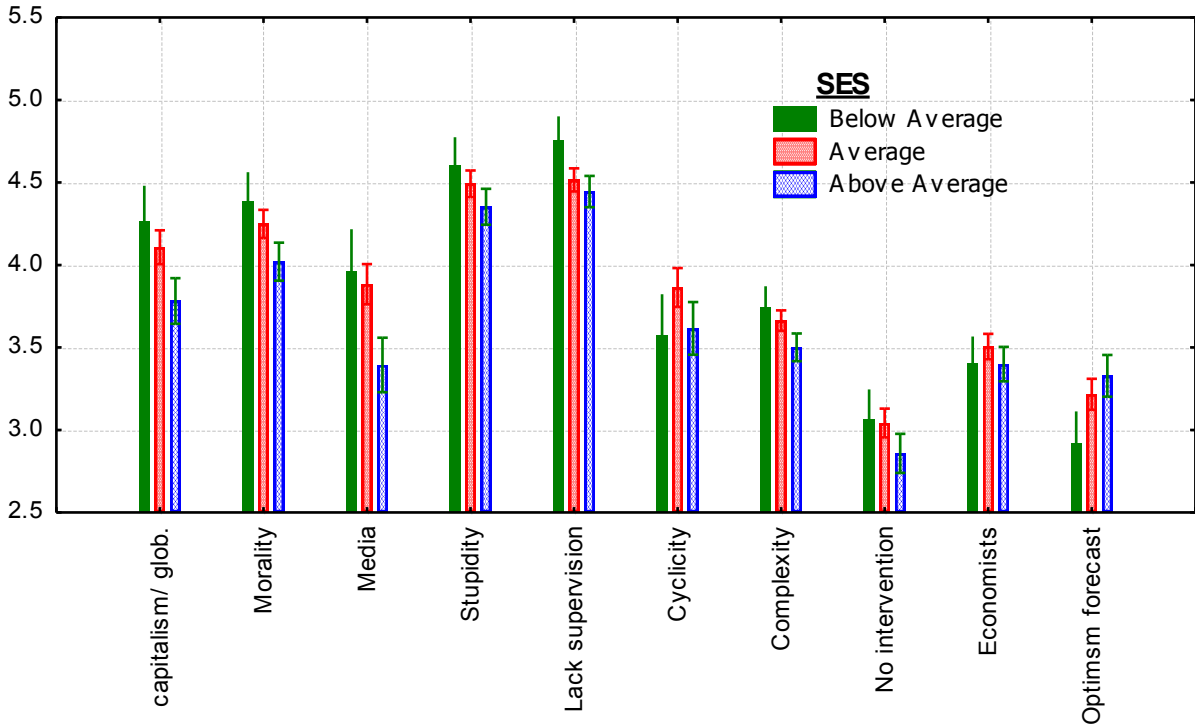


Figure 5

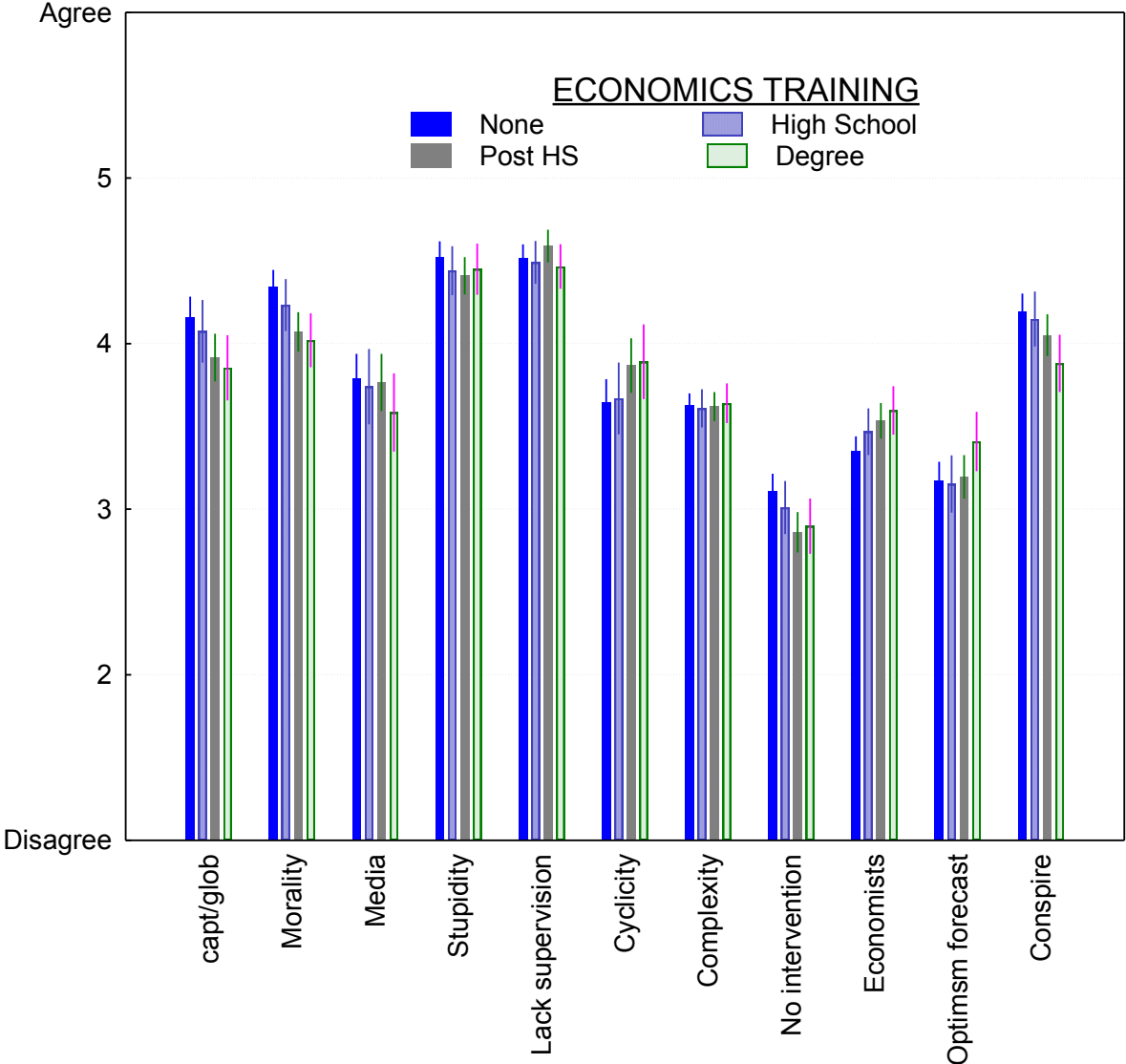


Figure 6

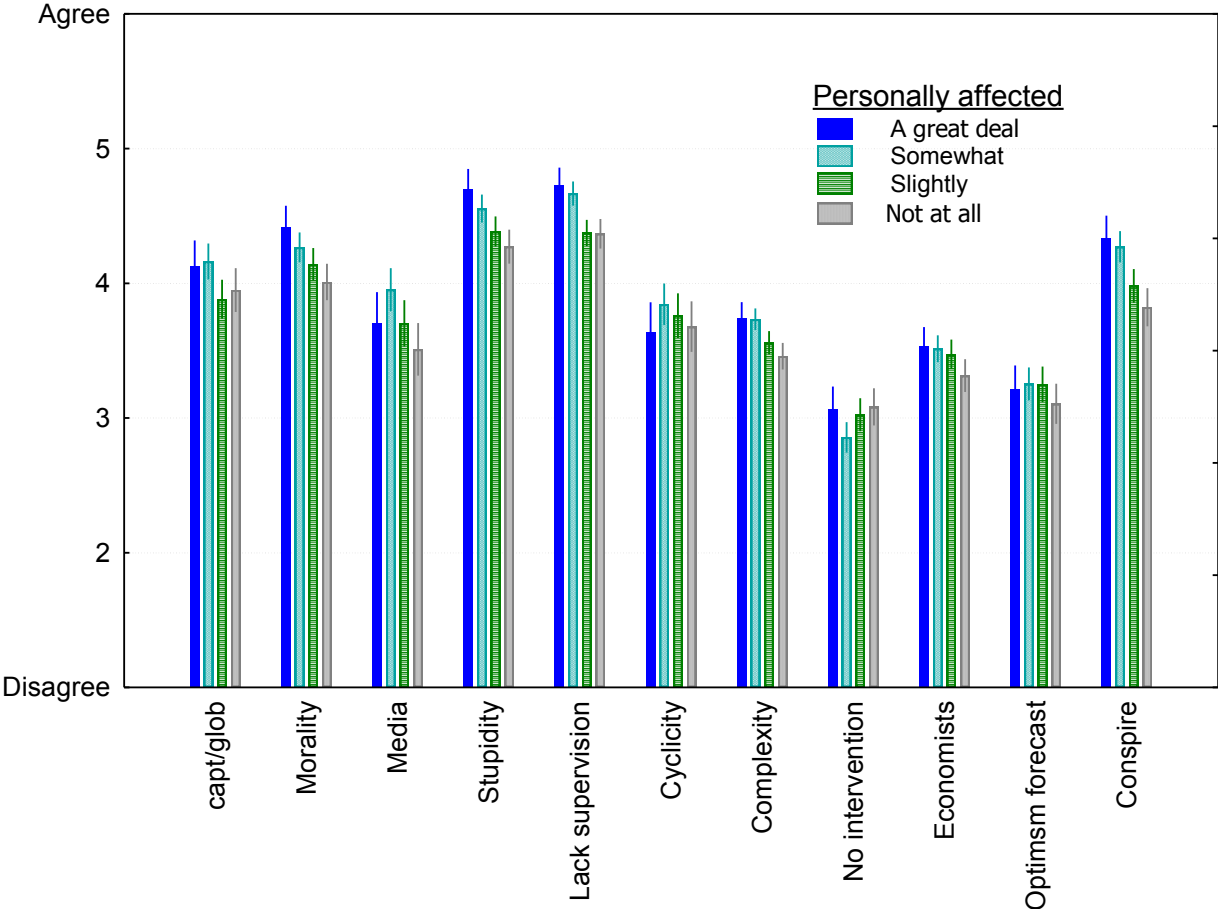


Figure 7

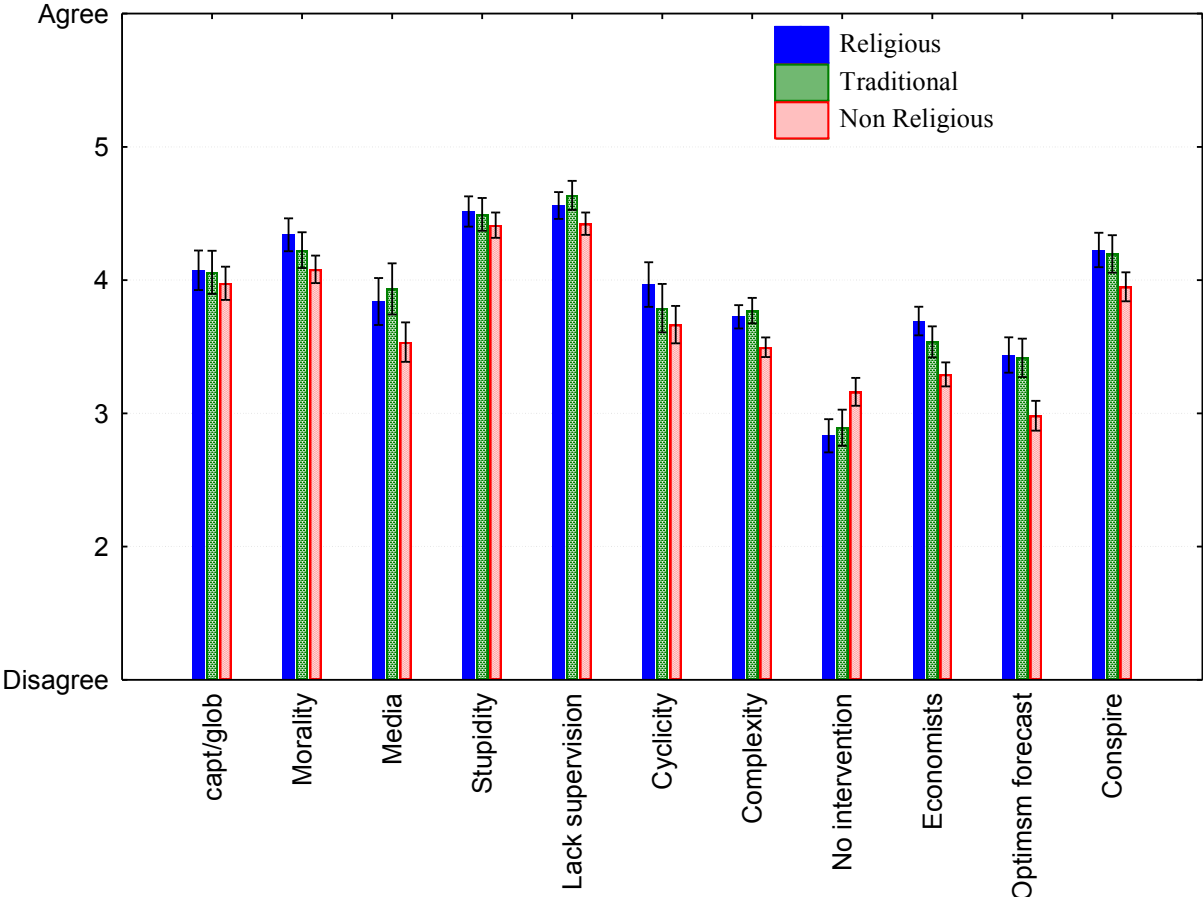
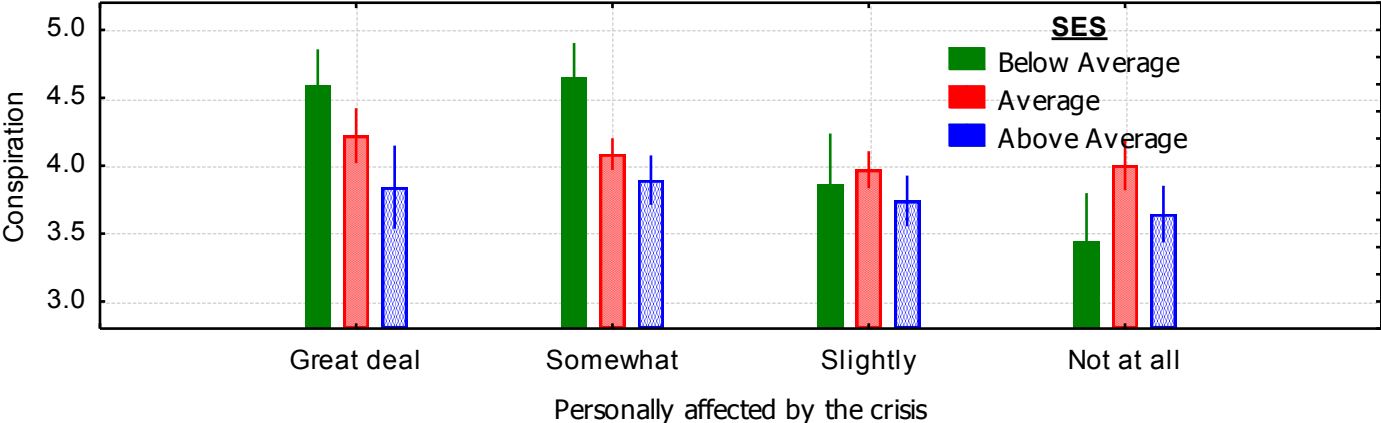


Figure 8



## Figures

Figure 1- Main indices (Mean and SD). The vertical lines represent the .95 confidence interval throughout.

Figure 2- Clustering of indices – Euclidian distances, Ward clustering.

Figure 3 -Support for No-intervention by Country.

Figure 4- Effect of self-perceived SES on the indices.

Figure 5 – Training in Economics, and how it affects the indices

Figure 6 – Being affected by the crisis – effect on indices.

Figure 7 – Religious belief and its impact on the indices.

Figure 8 – Effect of SES and Affected on Conspiracy accounts.

*Table 1 – Factor loadings of the Indices. Heaviest loading for each factor are bolded.*

	Factor 1	Factor 2	Factor 3
Capitalism & globalization	<b>0.61</b>	0.06	-0.34
Morality	<b>0.77</b>	-0.04	0.21
Media	0.44	0.26	0.45
Stupidity	<b>0.76</b>	-0.05	0.28
Lack supervision	<b>0.82</b>	-0.09	-0.14
Cyclicality	-0.09	<b>0.71</b>	0.23
Complexity	<b>0.64</b>	0.33	-0.13
No intervention	-0.02	-0.14	<b>0.85</b>
Economists	0.07	<b>0.66</b>	-0.18
Optimism forecast	0.13	<b>0.60</b>	-0.06
Explained Variance	2.84	1.52	1.29
Prop.Total	0.28	0.15	0.13