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Dimensions of Ideology. A Review of Social-Psychological Literature¹²

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Abstract

In social psychological literature, ideology is typically conceived as a relatively stable and organized set of general orientations that include interrelated attitudes grouped according to various sources of constraint, such as psychological disposition, general values, or ideological traditions. The paper reviews social-psychological literature on the organization of social attitudes. Research on this topic started nearly eight decades ago, inspired by the research on the structure of intellectual abilities. Since then, a large body of literature has been generated, which has not been systematically reviewed. Despite the long tradition, this literature has not resulted in proportional cumulative scientific development. The review should help improving this situation by listing the relevant studies, examining the research methodology and the main findings. The review ends with the critical summary of the main findings and methodological problems, and recommendations for the future research.

Keywords: Ideology, attitudes, social psychology, literature review

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1. Introduction. Dimensions of Ideology

Social sciences often conceptualize ideology as a relatively organized set of attitudes towards various social and political objects that could be derived from more general values and world-views. However, disagreements about the exact shapes of this structure, the level and source of coherence in such attitudes, are widespread. Converse (1964) argued that the general public's political attitudes are unstable, disorganized, inconsistent, and hence non-ideological (see also Zaller, 1992). In political science, dominant view is that the most important ideological dimension is the left-right distinction (e.g., Fuchs and Klingemann, 1990; Huber and Inglehart, 1995). Other authors see authoritarianism versus libertarianism as the main overarching ideological dimension characterizing the contemporary (Western) political culture (Flanagan and Lee, 2003).

Social psychologists, however, contend not only that individual-level political attitudes exhibit a considerable degree of coherence and structure (if adequately measured) but also that they are generally organized along familiar ideological lines (e.g., Kerlinger, 1984; Middendorp, 1992, 1991, 1978; Shikano and Pappi, 2004; Jost et al., 2009). Scholars, however, disagree on how this organization is best conceived. The views range from, for example, one-dimensional models where all specific attitudes are seen as reflecting a single basic underlying attitudinal dimension (e.g., conservatism dimension, Wilson, 1973a), to multi-dimensional models where related attitudes are grouped together in a number of specific factors, which are themselves unrelated (e.g., nine-dimensional model of Sidanius and Ekehammar, 1980).

This literature review is concerned with the research on the dimensionality of ideology, or the structure of social attitudes. According to Gabel and Anderson, "Fundamental to this approach is the assumption that policy positions are structured by underlying ideological dimensions that account for covariation in these positions. These ideological dimensions represent the structure of political discourse, representing a linguistic shorthand for political communication and competition" (2002, p.896).

Psychological literature often refers to social attitudes, but references to ideologies or political attitudes are also common. Attitudes are regarded as social when they refer to objects which have "shared general societal relevance in economic, political, religious, educational, ethnic, and other social areas" (Kerlinger, Middendorp, and Amon, 1976, p.267). When adjective 'political' is included, that often means that items referring to specifically political objects are involved (e.g., Durrheim and Foster, 1995).

Social psychology provided a significant contribution to understanding the structure of socio-political attitudes. Research on this topic started nearly eight decades ago, inspired by the research on the structure of intellectual abilities. Since then, a large body of literature has been generated. Yet, despite the long tradition, this literature has not resulted in proportional cumulative scientific development. One reason for this state of the affairs is perhaps the lack of a systematic review of the existing research. The aim of this paper is to help in this regard by listing the relevant studies, examining the applied research methodology, and critically summarizing the main results.

The review is divided into six parts: 1) brief presentation of the basic paradigm of the research field, 2) early studies, 3) Two-dimensional model of Hans Eysenck, 4) Wilson's theory of Conservatism as unidimensional and bipolar dimension, 5) Kerlinger's Dualistic theory, and 6) the 'Independent group'. Discussion and recommendations for the future research finalize the paper.

Basic Paradigm

The basic paradigm in this field states that social attitudes are interrelated and hierarchically organized. The interrelatedness means that, for instance, if someone has a negative attitude toward premarital sex, we would not expect that she endorses a particularly positive attitude toward striptease

bars. Hierarchical organization means that specific attitudes have their roots in more general orientations or general ideologies. These assumptions led to the investigation of the so called primary, latent, or basic attitudes, which could explain the correlation between many specific or manifest attitudes.

According to Eysenck's (1954; Eysenck and Wilson, 1978), attitudes are hierarchically organized in four levels. At the bottom level is a large number of *specific opinions*, "which are not related in any way to other opinions, which are not in any way characteristic of a person who makes them, and which are not reproducible" (Eysenck 1954, p.111). On the second level are *habitual opinions*, which are reproducible and more persistent individual features. They are expressed through different specific opinions. The first two levels are usually represented by various items in attitude questionnaires. *Attitude* is built of a certain number of related habitual opinions. For example, an anti-Semitic attitude consists of and is expressed through a number of negative opinions about Jews. This level can empirically be represented by summarized scores on attitude scales or by primary factors emerging from factor analyses of attitude scales. Attitudes at this level usually are not independent of each other; they tend to correlate, forming the fourth level - *ideologies*. For example, attitudes like anti-Semitism, ethnocentrism, patriotism, pro-religious attitudes and strict up-bringing of children are components of conservative ideology (*Ibid.*, pp.112-3).

Substance to these general factors is often given in terms of underlying dispositional features, such as tough-mindedness (Eysenck, 1954) or the fear of uncertainty (Wilson, 1973b). Another often used model assigns the integrative role to general value (e.g., Rokeach 1973; Maio et al. 2003). Sniderman, Brody, and Tetlock (1991) argue for a model where general values, i.e. ideology, determines intermediate values, which then determine specific attitudes. The idea can be illustrated by the following sequence: conservatism - economic attitudes - health policy attitudes. Thus, the 'deep' values, that is a general ideology, is the source of attitude constraint.

In Middendorp's theory (1991), the 'theoretical' source of general conservative ideology can be found in two general values applied to their respective domains: equality to socio-economic and freedom to politico-cultural domain (1991, p.113). In his words, "the interrelatedness of various ideas – expressed by statements about reality – comes about through the common reference of these ideas to one or a few underlying values" (Middendorp 1991, pp.60-61).

Early Studies

Thurstone (1934) and Ferguson (1939) were among the first to use factor analysis in order to determine the structure of basic social attitudes. The attempts were inspired by the studies of the structure of intellectual abilities. **Table 1** summarizes the main methodological features and findings of Thurstone (1934) and Ferguson (1939, 1940, 1942, 1973).

Table 1. Early studies: basic methodological features and results

Author /year	Sample	Attitude scales/items	Factor analysis method	Results
Thurstone (1934)	N=380, students, USA; ad hoc	11 scales; Equal-appearing-interval scale	Centroid extraction method; Orthogonal/graphic rotation	1.Radicalism-Conservatism;

Author /year	Sample	Attitude scales/items	Factor analysis method	Results
		type; scoring: mean on each scale ³		2.Nationalism-internationalism
Ferguson (1939)	N=185; students, USA; ad hoc	10 scales, each of 20 items; Equal-appearing-interval scale type (Thurstone); scoring: mean on each scale	Centroid extraction; 2 significant factors; graphic/orthogonal rotation (excluded not in accordance with the two basic dimensions).	1. Religionism; 2. Humanitarianism
Ferguson (1940)	N=144; reanalysis: N=790 students; USA; ad hoc	2 scales of 38 items each, on the bases of the above results	Same methods as above	Previous two factors confirmed
Ferguson (1942)	Reanalysis of data from 1939	Same methodology, previously excluded scales included in analysis	Same methods as above	Earlier two factors confirmed; added 3. Nationalism
Ferguson (1973)	N=1471 students; ad hoc	the same 10 tests as in 1939	Centroid 3 factors (G-K crit.) graphic/orthogonal and oblique	1. Religion 2. Humanitarianism 3. Nationalism

Ferguson began his analysis with 10 scales for the measurement of attitudes toward war, reality of God, patriotism, treatment of criminals, capital punishment, censorship, evolution, birth control, law, and communism (Ferguson, 1939). The first factor, *Religionism*, was defined as the acceptance of God's reality and negative attitude toward evolution and birth control. The orthogonal factor of *Humanitarianism* was defined by the attitudes toward the treatment of criminals, capital punishment and war. Later, he included the factor of *Nationalism* defined by positive attitudes toward law, patriotism, censorship and by negative attitude toward communism. His reanalysis in 1973 confirmed the stability of factors during time, with the suggestion that factors 1 and 3 could be collapsed into one dimension - Eysenck's *Tender-mindedness - Tough-mindedness*.

Thurstone's first factor, radicalism versus conservatism, should also be described, because it is representative of major factors in many subsequent models, usually labelled as conservatism versus liberalism in the US context. The *Radicalism* pole was defined by positive evaluation of evolution theory, birth control, easy divorce, and communism (and with higher IQ), while the *Conservative* pole was defined by a positive evaluation of religion, patriotism, Prohibition, and Sunday observance (Thurstone, 1934).

None of the authors provided more detailed justification for the inclusion of a particular set of attitudes for analysis. It seems that they relied on common sense to include attitudes that are representative for the whole complexity of relevant social attitudes in a particular context. However, this point is crucial regarding the purpose of the studies. Final factors can only be defined by the variables entered into the analysis. Hence, the obtained results should be interpreted as the structure of the *analysed* attitudes, not as the structure of *general* socio-political attitudes.

³ At that time, given the unavailability of fast and powerful computers, factor analysis was applied not to correlations between scale items, but to correlations between scores on scales measuring specific attitudes.

The two-dimensional Model of Hans Eysenck

Eysenck’s model of the structure of social attitudes is directly connected to the previously presented studies. His first study (in 1944) is partly a reanalysis of the Thurstone and Ferguson’s data. A selection of studies conducted by Eysenck as well as by other authors working within his model, are presented in **Table 2**. Additional studies in this tradition include Stone and Russ (1976), Bruni & Eysenck (1976), Hewitt, Eysenck, & Eaves (1977), Singh (1977), Smithers & Loblely (1978a,b).

In this model there are two basic social attitudes: Conservatism vs. Radicalism (R-factor), and Tender-mindedness vs. Tough-mindedness (T-factor). The radical pole is defined, for example, as a positive evaluation of evolution theory, strikes, welfare state, mixed marriages, student protests, law reform, women’s liberation, United Nations, nudist camps, pop-music, modern art, immigration, abolishing private property, and rejection of patriotism (Eysenck, 1954, 1976; Eysenck and Wilson, 1978). The conservative pole is characterized by positive attitudes toward white superiority, birching, death penalty, anti-Semitism, opposition to nationalization of property, birth control, etc. (*Ibid.*). Tender-mindedness is defined by items such as moral training, inborn conscience, Bible truth, chastity, self-denial, pacifism, anti-discrimination, being against the death penalty, and harsh treatment of criminals (Eysenck, 1951, 1954, 1976; Eysenck and Wilson, 1978). Tough-mindedness is expressed through favourable attitudes towards compulsory sterilization, euthanasia, easier divorce laws, racism, anti-Semitism, compulsory military training, wife swapping, casual living, death penalty, harsh treatment of criminals. Thus, tough-minded individuals tend to be in favour of harsh and tough social measures, including rejection of ethnic and other minorities (*Ibid.*). Since Eysenck argued for significant genetic determination of basic personality traits, social attitudes are seen as partly genetically determined (Abrahamson, Baker and Caspi, 2002; Bouchard et al., 2003; Eysenck, 1982).

Only the first dimension is interpreted as a “true” attitude dimension, in content similar to Thurstone’s Conservatism factor. The T-factor was explained as the projection of personality traits (extroversion in 1954, and in later works psychoticism), onto the social field, and hence there were very few items loading exclusively on this factor. After one study with a more representative sample the possibility of the existence of a *third dimension* was suggested (Eysenck, 1975). The conservatism factor was split into two dimensions: predominantly religious and predominantly economic. The latter factor was labelled as Politico-Economic Conservatism vs. Socialism (Eysenck, 1975).

Table 2. Methodological features and results of studies within Eysenck’s model of attitudes

Author/ year	Sample	Attitude scales/items	Factor analysis method	Results
Eysenck (1944)	a) reanalysis of Thurstone and Ferguson's results; b) 694 adults, ad hoc sample	a) same as Ferguson (1939) b) 32 'propositions' for social change, 6-point, Likert-type	Centroid method of extraction, graphic rotation, 2 significant factors (GK ^a)	2 orthogonal factors: 1. Conservatism-radicalism; and 2. Practical-theoretical ⁴ . Support for two additional factors: 3. Aggressive-restrictive, and 4. Freedom of interference-

⁴ Later named tough mindedness vs. tender-mindedness.

Author/ year	Sample	Attitude scales/items	Factor analysis method	Results
				coercion.
Eysenck (1947, 1954)	N=750 (250 conservatives, 250 liberals, 250 socialists)	40 item Inventory of Social Attitudes (ISA); Yes-no scoring	2 <i>interpreted</i> factors	2 independent factors ($r=-.12$): 1. Conservatism-radicalism (R); 2. Tender-tough mindedness (T)
Dator, (1969)	192 High Court and 15 Supreme Court judges from Japan	24 items selected from Eysenck 1947. Translated, and modified.	Unspecified	Confirms Eysenck's two dimensions, but with different names: 1. Progressive-conservative (or Superiority-equality), and 2. Religiosity.
Eysenck (1971)	N=2000, ad hoc sample, but covered gender, age and class	28 items, selected from ISA, 5-point Likert- type scoring	PC extraction; Promax rotation; 9 primary and 2 second-order factors	1. Authoritarianism- humanitarianism, 2. Religionism. Factors interpreted as rotated versions of the R and T factors.
Eysenck (1975)	N=368, quota sample from London	88 items, 5-point Likert type	PC extraction, 29 factors; retained 15 factors, Promax rotation; 10 factors interpreted, 3 second-order factors	1. Conservative-radical factor, 2. Tough-mindedness – tender-mindedness, and 3. Politico-economic Conservatism – Socialism.
Eysenck (1976)	N=1442, quota sample	68 items; Wilson- Patterson type of scale; Yes-no scoring	PC extraction, 13 primary factors (19 with eigenvalues>1); 2 second- order factors	1. R. and 2. T factors.
Stone, Ommun- dsen & Williams (1985)	286 students, USA; 273 students, Norway	60 items measuring left-right orientation and tough- mindedness; various formats	PF analysis, Varimax rotation; imposed No. of factors (2)	1. Conservatism (bipolar), 2. Tender-mindedness (Humanism)
	N=286 univ. students, USA			1. Nonpolitical Humanism, 2. "Normative and tough- minded with a tinge of Conservatism" factor

^a Guttman-Kaiser criterion for factor extraction.

^b Principal component method of factor extraction.

Replying to Adorno et al.'s (1950) positive psychological portrayal of (genuine) liberals⁵, and an unflattering depiction of the conservatives, Eysenck (1954; Eysenck and Wilson, 1978) suggested that

⁵ Adorno et al. (1950) were concerned with psychological sources of ethnocentrism. However, their conception of authoritarianism and the F-scale measuring it, have remained an important influence in this field. For instance, four components

British communists and fascists are both equally tough-minded, that is authoritarian. Tender-minded liberals are contrasted with tough-minded extremists on both sides of the political spectrum (fascists are 'tough conservatives', while communists are 'tough radicals'). In this way, Eysenck tried to supply empirical support for what is to be known as the 'extremism theory' of the relationship between ideology and authoritarianism (e.g., Greenberg and Jonas, 2003; Shils, 1954).⁶

Regarding the methodology in Eysenck's studies, it can be noted that none of the surveyed samples were randomly selected, though occasionally considerably large and heterogeneous. Most studies used statement-scales in Likert format, with various possible degrees of agreement. Number of significant factors is often determined quite subjectively.

It is difficult to refute the model if two-factors solutions are imposed on the data. Relatively restricted range of items also favoured obtaining the expected results. Nevertheless, the revision in 1975, i.e., dividing conservatism in economic and religious-moral part, is a significant evolution of the original model.

Conservatism as a unidimensional bipolar dimension

Glenn Wilson began his investigations as Eysenck's collaborator and co-author. While Eysenck shifted his interest the T-factor and its relationship to personality, Wilson remained focused on attitudes and the R-factor. He postulated unidimensionality and bipolarity of social attitudes: social attitudes are various aspects of one underlying dimension - Conservatism, with its opposite pole Radicalism (occasionally also called Liberalism, or Progressivism). In Wilson's description, typical adherent of conservative ideology is characterized by religious fundamentalism, pro-establishment politics, insistence on strict rules and punishments, militarism, ethnocentrism and intolerance of minority groups, preference for the conventional in art, clothing, institutions; anti-hedonistic outlook and restricted sexual behaviour, opposition to scientific progress, and superstition (1973a, pp.5-9).

According to factor analysis results (Wilson and Patterson 1970), these traits converge into four related attitudes or components of the general conservative ideology: 1. Militarism or Punitiveness, 2. Antihedonism, 3. Ethnocentrism, and 4. Religious Puritanism. **Table 3** presents not only studies on the base of which Wilson formulated his theory, but also works of other authors applying his scales in different settings.

Wilson and Patterson (1968, 1970) developed a new technique for measuring social attitudes: the so-called Wilson-Patterson Conservatism Scale (the 'C-scale'). It consisted of a list of words or 'catch-phrases', like *Religion*, *Death Penalty* or *Abortion*, and respondents were asked to express their approval thereof. Studies reported in **Table 3** tend to support the unidimensionality hypothesis although sometimes relying on tenuous empirical foundation (e.g., Truett 1993).

Additional studies in this tradition include also Robertson & Cochrane (1973), Wilson & Lee (1974), Sidanius, Ekehammar & Ross (1979), Nias (1972), Green et al. (1988), Katz (1988b).

of general conservatism in Wilson's (1973a) model (Punitiveness, antihedonism, ethnocentrism and religious puritanism) are described as characteristic for individuals with high score on the F-scale.

⁶ Shikano and Pappi (2004), though coming from entirely different research tradition, reported broadly corresponding findings. Their second dimension of political space in Germany was defined as "the degree of radicalism in the sense of non-established vs. established parties" (Ibid., 10).

Table 3. Basic methodological features and results of Wilson's main studies, and of other authors' studies using Wilson-Patterson Conservatism Scale

Author / year	Sample	Attitude scales/items	Factor analysis method	Results
Wilson & Patterson (1970)	Samples from: UK, Netherlands, New Zealand, West Germany	50 items Wilson-Patterson (W-P) Conservatism Scale (C-scale), yes-no scoring	PC extraction, no rotation	Conservatism as general factor, consisting of 4 components: 1. Militarism-Punitiveness, 2. Anti-Hedonism, 3. Ethnocentrism, 4. Religion-Puritanism,
Sidanius & Ekehammar (1980)	N=532; "relatively representative for students in Stockholm"; Sweden	36 items WPAI (Conservatism) scale	Principal factors extraction, 9 factors with eigenval.>1; no inf. about rotation or correl. between factors	1. Political-economic Conservatism, 2. Racism, 3. Religion, 4. Social inequality, 5. Pro-West, 6. Authoritarian Aggression, 7. Conventionalism, 8. Ethnocentrism, 9. Xenophobia
Katz (1988a)	N=356 Israeli undergraduates (252 Jews & 104 Arabs)	50-items, W-P Conservatism Scale	PC extraction; Varimax; 4 factors according to scree-test	General Conservatism, and the same 4 factors as in Wilson 1970
Ortet, Perez & Wilson (1990)	N=185 university students; Catalonia	50-items WPAI	PC extraction; scree-test for No. of factors; 5 factors extracted; no rotation	1.General Conservatism and 'specific content' factors: 2. Realism-Idealism, 3. Permissiveness-Conventional Institutions, 4. Women's Liberation, 5. Punitiveness.
Walkey, Katz & Green (1990)	Volunteers: 203 from South Africa, 252 Jews and 104 Arabs from Israel, 219 from Japan	23 items from W-P Conservatism scale	PC extraction; no rotation; interpreted only 1 st principal component	C scale measures concept "related to the Judeo-Christian religious tradition, with its firmest roots in the English speaking branch of that tradition" (p.988)
Heaven (1992)	N=273, heterogeneous sample, Australia	50-items revised C-Scale (W-P)	PC extraction, Varimax rot., 15 eigenval.>1; extracted 4 factors, according to scree-test	1. Religion/morality, 2. Equality, 3. Punitiveness, 4. Hedonism
Truett (1993)	N=29055(!) volunteers; 14466 twins & 14589 their family members; USA	28-items W-P Conservatism Scale; Likert 3-point	PC extraction; no rotation; interpreted only 1 st PC accounting for 18% of variance	General Conservatism

Author / year	Sample	Attitude scales/items	Factor analysis method	Results
Riemann et al. (1993)	N=184; univ. students; Germany	162 items - "political issues currently discussed in Germany"; W-P type; 7-point Likert	PC extraction; 10 factors eigenval.>1; 4-factor Varimax solution retained	a) 1 st principal component as General Conservatism dimension; b) 4 Varimax factors: Conservatism, Social welfare and women equality, Liberalism and technological progress, and Taxation for environmental purposes.

Strategy of the data analysis, i.e., the interpretation of the first principal component as a general dimension, and then *orthogonal* rotation of theoretically correlated four factors – elements of conservatism – is questionable. If lower-order factors are elements of a higher-order factor, they should be correlated, which would imply oblique rotation. In cases when analytic methods were less restrictive, the results provided less clear support for a single overarching dimension. For example, Sidanius, Ekehammar, and Ross (1979) and Sidanius and Ekehammar (1980) ended their analyses with 6 and 9 factors respectively, suggesting a rather loose organization of primary social attitudes.

Riemann et al.'s (1993) research is a good example of studies following Wilson's approach. Using a relatively small student sample from Germany (thus providing a cross-cultural test), they applied the 162-item W-P type of scale referring to a wide set of "political issues currently discussed in Germany". The first principal component was interpreted as the General Conservatism dimension. Varimax rotation of four factors resulted in the following components of the general conservatism: (1) Conservatism, (2) Social welfare and women equality, (3) Liberalism and technological progress, and (3) taxation for environmental purposes. Although the results lend some support for Wilson's model, it is clear that particular attitudinal configuration depends on the context, but especially on the particular set of items included in the analysis. This explains, for example, the emergence of an environmentalist factor. However, Riemann et al. provided an independent test of the psychological roots of ideological orientations. They correlated a Big-Five personality questionnaire with the isolated attitudinal dimensions, and found that openness to experience was strongly related with general conservatism. This is important since this trait is related both to Wilson's concept of the fear of uncertainty and to Eysenck's concept of psychoticism.⁷ Conscientiousness correlated with general conservatism as well. This personality trait is similar to what was in earlier psychological vocabulary referred to as anal character or obsessive personality. Finally, agreeableness, as well as openness to experience, was positively related with the social welfare factor and with environmentalism.

Sampling of respondents and items in this group of studies is typically non-probabilistic, making the conclusions difficult to generalize to non-student populations. However, an interesting and valuable feature of these studies is an attempt to test the scale and theory in various cultural settings. Several studies (e.g., Green et al., 1988; Heaven, 1992; Robertson and Cochrane, 1973; Walkey, Katz, and Green, 1990) supported the almost abandoned idea about the multidimensionality of social attitudes and their cultural determination. For example, Walkey, Katz, and Green (1990) found that the first principal component was less consistently structured the more the samples were culturally distant from the Western, English-

⁷ And to recently elaborated concept of the need for cognitive closure as well (Jost et al. 2003).

speaking samples. In their words, the C-Scale measures a concept "related to the Judeo-Christian religious tradition, with its firmest roots in the English speaking branch of that tradition" (Walkey, Katz, and Green, 1990, 988)

Wilson argued for psychological basis of the concept of conservatism. In his words, it is "a reflection of a generalized fear of uncertainty, whether *stimulus uncertainty* (complexity, ambiguity, novelty, change, etc., as states of the physical and social environment) or *response uncertainty* (freedom of choice, need conflict, etc., originating from within the individual)" (Wilson, 1973b, 187, italics in original). Hence, in different environments, fear of uncertainty (i.e., the personality foundation of conservative attitudes) should be expressed in different ways.

Kerlinger's Dualistic Theory

According to Kerlinger's (1984) *dualistic* conception of social attitudes, conservatism and radicalism (or liberalism) are not the opposite extremes of one dimension. Instead, they are orthogonal, independent dimensions. Hence, one's stance on conservative issues does not tell much about her positions on liberal issues. The explanation is that for the conservatives, *critical referents* are different than for liberals. Private property or religion are, for example, critical referents for conservatives, while civil rights and socialized medicine are for liberals. Thus, according to the theory, one can be both: conservative and liberal, or neither. Negative correlations between conservatism and liberalism according to Kerlinger (1984) are the result of improper scaling, factoring, or sampling bias (too many extremists sampled, who are by definition *against* something).

According to Kerlinger's final model, higher-order Conservatism factor is defined by three lower-order factors: 1. *Religiosity* (and corresponding referents: religion, church, Christian, faith in god, etc.); 2. *Economic Conservatism* (referents: profits, money, business, free enterprise, corporate industry, capitalism, private property, etc.), and 3. *Traditional Conservatism* (referents: discipline, law and order, authority, family, tradition) (Kerlinger 1984, 239). Five Liberal factors received repeated confirmation: 1. *Civil Rights* (civil rights, blacks, racial integration, desegregation), 2. *Social Liberalism* (social security, socialized medicine, poverty program, economic reform, social welfare, etc.), 3. *Sexual Freedom* (equality of women, women's liberation, birth control, abortion), 4. *Human Warmth and Feeling* (love, human warmth, affection, feeling), and 5. *Progressivism* (child centred curriculum, child's interests and needs, pupil personality, etc.) (Kerlinger, 1984). Kerlinger's main results and works of some of his associates are presented in **Table 4**.

Middendorp and deVries (1981) performed an important methodological test in their research. They compared the catch-phrase and statements types of scales (80 items in each of the two types of scales), and, despite some differences, obtained generally similar results. In this way, the claim that some differences between various models are entirely based on methodological grounds was refuted. Although they started from the Kerlinger's model, their conclusions provided basis for the later more elaborated Middendorp's (e.g., 1991) model of the structure of ideology. They concluded that behind the obtained structure, one can detect a theoretical ideological model of the "progressive-conservative domain". In their words, "progressive attitude 'applies' the value of *equality* to the *economic* realm (equality of income, property, life chances, etc.) and the value of *freedom* to the *non-economic* realm (e.g., tolerance, permissiveness). Conservative attitudes are the opposite of this: freedom is applied to the economic realm (free enterprise, opposition to government interference) and equality, in some sense at least, is applied to the non-economic realm (e.g., conformist to conventional social norms and to traditional standards of behaviour)." (Middendorp and deVries, 1981, p.252, italics in original).

Table 4. Kerlinger’s studies and studies testing the dualistic theory of social attitudes

Author/ year	Sample	Attitude scales/items	Factor analysis method	Results
Kerlinger (1972, 1984)	N ~ 530; students of education, teachers; USA	50 items/referents selected from the sample of 400; 7-point, Likert	Principal factors (PF) extraction, Promax rotation, 6 first-order and 2 second-order factors	Two independent factors: 1. Liberalism, 2. Conservatism
Marjoribanks & Josefowitz (1975)	N=460, secondary school students; England and Wales	50-items Conservatism Scale (W-P), + 2 other Likert-type scales	a) PF analysis of each scale, b) PF of 41 selected items, 8 factors extracted 2 nd -order factoring - 2 factors; Varimax rot.	8 1 st -order factors: Racial prejudice, Nationalism, Patriotism, Social conservatism, Disrespect for authority, Political activism, Modern art, and Sexual freedom; Conservatism and Liberalism as 2 nd -order factors.
Kerlinger, Middendorp and Amon (1976)	N=1925; students from USA & Spain & random sample from Netherlands	72-78 items, W-P type REF VIA scale; “freely adapted” for European countries	PF extraction; subjective criteria for No. of factors; 8-12 1 st -order factors; Promax rotation; three 2 nd -order factors	“General support” for independent factors of Conservatism and Liberalism which “underlie many or most social attitudes”.
Kerlinger (1984)	12 samples, N from 206 to 685; mostly students; USA and West Europe	Total ~200 items; 6 different scales, mostly W-P type; 30-78 items, 7-point Likert	Principal Factors analysis; Analysis of covariance structures	Two independent dimensions: 1. Conservatism, 2. Liberalism
Middendorp and deVries (1981)	N=815; general population; Netherlands	80 items - referents (W-P type); 6-points of dis/agreement	PF extraction; Varimax & Promax rotations; extracted 4 factors - the ‘best interpretable’ solution; two 2 nd -order factors	1 st -order: 1. Consensus, 2. Libertarian-Traditional, 3. Left-Right, 4. Liberalism-Conservatism; unclear 2 nd -order factors
	N=1927; general population; Netherlands	80 items - statements, based on the above referents; 5 or 7-point Likert		1 st -order: Liberalism-Traditionalism, 2. Left-Right, 3. Liberalism-Conservatism, 4. Attitude towards social change

Many methodological features of studies in this group are similar to the previously reviewed studies, but there are significant improvements. Several Dutch studies are based on random national samples. Kerlinger (1984) adopted Wilson-Patterson type of scales (calling the items ‘referents’), but he selected referents out of more than 400 possibilities found through the systematic analysis of literature in political philosophy, public discourse, etc. He was more methodical in data analysis as well, systematically performing higher-order extraction and applying confirmatory procedures. Still, the applied methodology

favoured the confirmation of the theory through subjective determination of the number of significant factors and orthogonal rotation of second-order factors.

Independent studies

There is a considerable number of socio-psychological studies related to the problem of the structure of general social attitudes which are not related to the reviewed three models. Some of them are presented in **Table 5**.

The importance of these studies is twofold. First, they show the dependence of the results on theoretical background and methodological approach (variables, samples, statistical analysis). Second, they document a considerable similarity between findings in these studies and those from the previous three groups, in spite of the differences in methodology.

Table 5. Independent studies: Methodological features and main results

Author /year	Sample	Attitude scales/items	Factor analysis method	Results
Sanai (1950)	N≈300 adults; London, UK	16 items; 7-point Likert type collapsed to 2 points	Burt's Bipolar Analysis; extracted: 1 general factor and 2 bipolar factors	1. Progressivism-conservatism, 2. Atheism/socialism vs. Social progressivism, 3. Socialism vs. atheism/agnosticism
O'Neil & Levinson (1954)	N=200 university students	32 items: 10 from Traditional family ideology, 8 - ethnocentrism, 8 authoritarianism, and 6 religious conventionalism	Centroid method, 4 orthogonal factors extracted	1. Religious Conventionalism, 2. Authoritarian submissiveness, 3. No name, 4. Masculine strength façade.
Rokeach & Fruchter (1956)	N=207 college students	43-item Dogmatism scale (D), and 9 other scales	Analysed are summarized scores on scales; Centroid extraction, orthogonal rotation of 3 factors	1. Anxiety, 2. Liberalism-conservatism, and 3. Dogmatism /authoritarianism /rigidity
Comrey & Newmeyer (1965)	N=212 volunteers; USA	120 items: 4 homogeneous items for each of 30 attitude variables; 9-point Likert	a) FA of items intercorrelations and construction of 25 'micro' attitude scales for the main analysis; b) 'homogeneous-item-dimension' extraction, Varimax rotation	One second-order factor: Radicalism-Conservatism, and 5 first-order factors: 1. Welfare-State attitudes, 2. Punitive attitude, 3. Nationalism, 4. Religious attitude, 5. Racial Tolerance.
Kerlinger & Rokeach (1966)	N=1239, mostly students,	D-Scale (40 items) F-Scale (29 items); 7-point Likert type	Principal axes analysis; Promax rotation, 2-nd order analysis	2 nd -order factors: 1. Dogmatism, 2. & 3. Authoritarianism

Author /year	Sample	Attitude scales/items	Factor analysis method	Results
	USA			(fascistic version)
Durrheim and Foster (1995)	N=244 psychology students, South Africa	27-item, shortened C scale	4 factors (Scree test), Orthoblique rotation	1. Inequality, 2. Religious conservatism, 3. Political and economic conservatism, 4. Punitiveness.
Enyedi & Todosijević (2003)	Random national sample of adult Hungarians (N =1002)	18 statement-type items & 22-item catch-phrase scale	PC extraction and Oblimin rotation; Scree test; 4 factors explaining 36,3% of variance	(1) Conventionalism, (2) Socialist conservatism, (3) Right-wing conservatism, (4) Libertarianism
Todosijević (2005)	Random sample of Belgrade residents (N=502)	70 Likert-type items, derived from theoretical and empirical literature	Initial extraction, construction of mini-scales – 15 primary dimensions; 4 order factors	Four 2 nd order factors: 1) socialist conservatism, 2) right-wing conservatism, 3) social order and hierarchy orientation, and 4) post-materialist orientation
Todosijević (2008)	Hungary: national random sample, N=1000 Serbia: students, N=120	17 Likert-type items, "relevant for constructing more general ideological orientations."	PC extraction; 2 factors according to Scree test; explain 38.12% and 27.92% of variance in Hungary and Serbia, respectively.	Hungary: (1) social alienation & socialism and (2) nationalist anti-socialism. Serbia: (1) social alienation & egalitarianism; (2) pro-communist nationalism
Kandler et al. (2012)	872 twins, Germany	8 bipolar items, intended to measure the left-right differentiation	PCA extraction; 2 factors according to the minimum average partial tests for the number of components.	Two factors: (1) acceptance of inequality [AI], and (2) rejecting system change [RC].

A particularly interesting example is Comrey and Newmeyer's study. It is one of the methodologically best studies reviewed here, but without much visible influence on later research (Todosijević, 2005, is an exception). Yet, the results fit the Eysenck's and Wilson's models well. A serious problem in many of the reviewed studies based on item analysis is low commonality and consequent low percentage of explained variance. The root of the problem is in the inadequate reliability of the single items. One solution is to use hierarchical factor analysis. Another answer to the problem, adopted by Comrey and Newmeyer (1965), is to construct 'micro-scales', consisting of several semantically close items, thus providing more reliable measures at the initial stage of analysis. In their case, a single second-order factor accounted for 42% of variance, which is considerably more than, for example 18% in Truett (1993).

In recent years, several studies were conducted in Eastern Europe (Enyedi & Todosijević, 2003, Todosijević, 2005, 2008). Todosijević (2008) conducted a study based on a random sample of Belgrade residents (N=502) in the Spring of 2002. The results showed that Serbian mass political attitudes vary along fifteen latent dimensions, including dimensions such as nationalism, militarism, economic liberalism, and environmentalism. Second-order factor analysis revealed four general ideological dimensions: 1) socialist conservatism or the "regime divide", 2) right-wing conservatism, 3) social order and hierarchy orientation, and 4) the post-materialist orientation. This, as well as various other studies in the post-communist context, provide evidence of the association between political left and authoritarianism (e.g., Enyedi and Todosijević, 2002; McFarland, Ageyev, and Djintcharadze, 1996), suggesting the importance of political history and socio-cultural factors.

Yet, on another level, the same evidence supports the general association between personality dispositions and attitudes. In Serbia, authoritarianism correlated both with the 'socialist conservatism' and the more common type of right-wing conservatism. Hence, authoritarianism appears to be at the roots of *psychological* conservatism and anti-democratic orientation more generally, the expression of which depends on particular cultural context.

Discussion and implications

Regardless of methodological and in the amount of details reported, some principal tendencies and features in the reviewed studies can be outlined. Three models of the structure of social attitudes have dominated the field for several decades: Eysenck's, Wilson's and Kerlinger's. Eysenck's Conservatism-Radicalism dimension served as the basis for the development of Wilson's and Kerlinger's models, disputing over its bipolar or dualistic nature (Kerlinger, 1972, 1984; Wilson, 1973a; Wilson and Patterson, 1968). Tough-mindedness has been linked to psychological variables, such as authoritarianism (e.g., Eysenck and Wilson, 1978; Ray, 1982) or dogmatism (Rokeach, 1960). However, it is difficult to see which of the models is on firmer empirical grounds.

Most studies are based on small, ad hoc samples, usually social science students. Two types of instruments have dominated the field: lists of statements in Likert format, and Wilson-Patterson lists of referents. The size of scales varies from less than 20 to more than 200 items. The content of the items and process of their selection often remains unexplained, but there are exceptions where the selection of questions is explicitly justified (e.g. Kerlinger, 1984, Middendorp, 1989, Todosijević, 2005).

The interpretation and labeling of the extracted factors is a separate problem. Many of the labels proposed in literature are synonymous. Sometimes the same label denotes different factors, and *vice versa* - similar factors have different labels. Frequently, there is not enough information to compare the content of factors besides their labels. For example, Ortet, Perez, and Wilson (1990) named one of their second-order factors as idealism vs. realism. However, the meaning of this factor is clearer if we know that the realism pole is defined by the support for apartheid and white superiority.

Overall, more than thirty different factor labels figure in the reviewed studies, various versions of conservatism and liberalism being the most common. Other frequent labels are nationalism (and varieties like ethnocentrism, racism, patriotism), tender-mindedness (and related concepts - authoritarianism, Machiavellianism, Punitiveness, dogmatism), and religiosity.

The review shows that it is not always easy to connect theoretical concepts with the empirically obtained attitudes. In order to avoid subjectivity, it is useful to pre-define ideological content of the items. In this way, the obtained factors will be interpreted in a more objective manner, but also the results would have clearer theoretical implications. If a dimension contains items or scales supposed to measure different

ideological dimensions, yet they still appear on a single factor, such results suggest 'factor convergence' specific for the analyzed case. This strategy is not applicable in a purely inductive research.

It is important to note that the reviewed theories evolved over time. Eysenck (1975) introduced a third dimension, representing the economic left-right division. Wilson and collaborators extensively compared results from various cultures. They observed that with the greater cultural difference from the English speaking Judeo-Christian tradition there is less evidence of the ideological unidimensionality (Walkey, Katz, and Green, 1990). Middendorp and deVries' (1981) results provide the basis for the integration of Kerlinger's dualistic and Wilson's bipolar theories.⁸ When there is a consensus in the population about certain referents, they are not the basis for the left-right division. Inclusion of referents about which opinions are polarized produces polarized factors.

Referring back to the hierarchical model of attitude structure, the literature proposes different origins of co-variation between elements in the hierarchy. Semantic similarity and logical constraints operate predominantly on the lower levels. Common psychological functionality, elite discourse, basic political values are more relevant for the structuration at higher levels. Moreno (1999), for example, sees the source of the most general ideological configuration in elite divisions and visibility of different elite fractions. Middendorp (1991) attributes the strongest influence to the elite discourse and influential intellectual traditions, as well as to the general political values from which the main ideological streams are derived.

Researchers in the socio-psychological tradition offer potentially universally applicable models attempting to explain individual differences in ideological orientations (Jost et al., 2009). Dispositional and personality concepts such as authoritarianism, the 'need for cognitive closure' (Jost et al., 2003; Maltby and Price, 1999), "the tough-poise, extroversion and rigidity" (Birenbaum and Zak, 1982, 512), fear of uncertainty (Wilson, 1973b), or general values (Rokeach, 1973; Maio et al., 2003), contributed significantly to our understanding of the integrating factors behind certain attitudinal configurations. Recent research suggests that causal chain might start before personality – in genetic factors. According to Kandler et al. (2012), political attitudes are transferred between generations not environmentally but genetically, via personality.

The best contribution of the future research would, perhaps, be in comparative analysis of the interplay between psychological and socio-political determinants of the attitude structuration. Thus far, we know that personality, social factors (e.g. class divisions, political history) and politics (ideological polarization) all affect the attitude organization. But, we lack the knowledge about the nature of interaction between these factors.

Methodological implications

Several methodological improvements could move the field forward. It would be useful to develop more reliable measures of primary attitudes, through creating 'mini-scales' for measuring habitual opinions (for examples see Comrey and Newmeyer, 1965; Todosijević, 2005). Without more reliable measures at the lower level, it is difficult to obtain reliable and valid measures on higher levels. Kerlinger's three second-

⁸ Birenbaum and Zak (1982) argue that Kerlinger and Eysenck models can be integrated as well. Their results support Kerlinger's idea about criterion validity, as well as Eysenck's hypothesis about the role of personality. They obtained two orthogonal factors in Israel, similar to Kerlinger's conservatism and liberalism factors. A personality trait, described as consisting of "the tough-poise, extroversion and rigidity", correlated with one of the dimensions, i.e., "only traditional attitudes correlate with personality traits" (Birenbaum and Zak 1982, 512).

order factors (Kerlinger, Middendorp, and Amon, 1976), for example, accounted only for 18% of total variance of 11 primary factors. In such cases it is difficult claim that higher-order factors are really relevant 'underlying dimensions' of all social attitudes.

The selection of items should be substantively representative for the domain in question. Biased and partial coverage of hypothesized ideological dimensions often characterizes both empirical models and theoretical accounts. Reliance on *ad hoc* sampling of variables tends to violate one of the basic requirements for discovering the 'laws of structure', namely, representativeness of the sample of variables for the domain under investigation (Nesselroade and Cattell, 1988).⁹ In some contemporary studies in post-communist context (Todosijević, 2005), for instance, theoretical and empirical literature about relevant political-ideological dimensions guided the selection of items.

Particular attention should be given to the interpretation of the obtained factors. It can be enhanced by systematically relating the isolated factors to a broad set of theoretically relevant independent and dependent variables. The former group, for example, would include standard socio-demographic background variables, dispositional variables such as personality dimensions, authoritarianism, prejudice, and political preferences.

Additional avenues for the future research include the question of the relevance of ideological dimensions for political behaviour. Describing how political attitudes are structured and explaining individual difference thereof are important topics in their own right. The significance of such knowledge, however, vastly increases if it helps understanding political action. For instance, in Serbia in 1998, the dimension of pro-communist nationalism strongly correlated with party preference (Todosijević, 2008).

Social and political context affects attitude structure - ideology appears differently structured in western Europe, Middle and Far East, and the post-communist world. In order to understand the logic of variation, additional comparative research is needed. For instance, 'new democracies' of Eastern Europe provide an attractive ground for the discovery of atypical ideological configurations. On the one side, these countries are, in the global perspective, relatively close to the 'West' in terms of cultural and social features, and in their exposure to the main ideological currents and intellectual traditions. Yet the unique experience of the communist monopoly over political discourse has left at least a temporary mark on the way citizens organize and express their basic political views (e.g., Berglund, Ekman, and Aarebrot, 2004; Evans and Whitefield, 1993).

Finally, reliance on national representative samples would be more than welcome. It would secure that respondents of various ideological orientations are adequately represented. The typical student samples are likely to introduce biases, particularly in this area.

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