Race and perception of human diversity: Five European case studies

Katarzyna A. Kaszycka & Jan Strzałko

Department of Human Evolutionary Ecology, Institute of Anthropology, Adam Mickiewicz University, Poznań, Poland e-mail: kaszycka@amu.edu.pl

Summary - Against the background of the results of surveys carried out previously on American, Polish, and European academics, we present new data on the perception of races among non-biological anthropologists. In five case studies, we surveyed 585 respondents belonging to the academic community (of biologists and cultural anthropologists) and ordinary people from three European countries: Poland, Czech Republic and England. All groups were concordant on the question "Are there [biological] races in humans?" – replying mostly in the affirmative. For the number of races that humans can be divided into, respondents' views were discordant depending on the society they live in. Regarding opinions about supposed racial characteristics, the response patterns of all groups were again much alike: The vast majority of the participants thought of human races in terms of morphological differences, but mostly did not see an association between race and intelligence, personality and religion. We suggest that the persistence of racial thinking about human diversity depends, to a large extent, on schooling and education, and certainly is a consequence of lack of academic and public discourse on race.

Keywords - Race concept, Race and diversity, Perception of race, Education, Survey.

Race as a scientific concept arose in Europe in the eighteenth century with the idea that humans can be subdivided into geographically separated groups that show similarities within va group and differences between groups. For nearly 200 years - certainly since the popularization of human classification by Johann Blumenbach in 1779, races seemed to be, and were treated as, a taxonomic reality. Up until the emergence and subsequent acceptance of the Modern Evolutionary Synthesis, which combined Darwinian natural selection and Mendelian genetics, zoologists and anthropologists commonly regarded the 'subspecies' category as synonymous with 'geographic race'. The subspecies concept was then questioned in zoology (Wilson & Brown, 1953), and the race concept (within the human species) challenged in anthropology (Montagu, 1962; Livingstone, 1962; Brace, 1964; Lewontin, 1972). The disintegration of the colonial empires in the 1950s-1960s and the civil rights movement of the 1960s also favored a new perspective on human variability, in regard to both its

biological and cultural diversity. Over time, race (as biology), from being a core concept in physical anthropology was, at least by some, degraded to a 'myth' (e.g., Montagu, 1942; Lieberman, 1968; Goodman 2000; Graves, 2004; however see Gravlee, 2009), and the new data indicate continuous rejection of race as a biological concept among anthropologists (Wagner *et al.*, 2017).

Although some authors optimistically stated that: "As far as the textbooks were concerned, race was approaching conceptual extinction" (Lieberman & Jackson, 1995, p. 233), or argued that "race is dead as a scientific method for understanding human variation" (Armelagos, 1995, p. 108), others, on the other hand, warned that outside anthropology racial thinking remains common (Keita & Kittles, 1997; Mukhopadhyay & Moses, 1997; Caspari, 2018), gets re-legitimated as biological by pharmacogenomics studies (Condit, 2007), or simply that "The race concept is not dead, and is unlikely to die soon." (Caspari, 2010, p. 117).

A number of question naire-based surveys have been carried out since the first one in the 1970s by Lieberman and colleagues to determine the attitudes of various groups of American scholars towards race. These surveys were conducted over a period of three decades among anthropologists (biological and cultural), but also among biologists (specializing in animal behavior) and developmental psychologists (Lieberman & Reynolds, 1978, 1996; Lieberman et al., 1989, 1992, 2003). Further sources of data came from Polish physical anthropologists (Kaszycka & Štrkalj, 2002; Kaszycka & Strzałko, 2003a,b), and a group of European physical anthropologists and scholars of related disciplines (Kaszycka et al., 2009), from two formerly different ideologies: the so-called Western and Eastern Bloc countries. These and other studies (e.g., Lieberman et al., 2004) clearly show that among scholars of different disciplines and countries/regions of the world there are essential differences in regard to the race issue. At the same time, data on common understandings of race were also presented for American lay people (Condit et al., 2004; Dubriwny et al., 2004).

Against the background of previous research on the status of the concept, a survey conducted on five groups of respondents from three European countries is presented. Europe remains interesting in this regard because of its socio-political history, being once divided by the Iron Curtain into two spheres of influence and ideologies. Moreover, as the previous European studies (including the Polish ones) were conducted almost exclusively on physical/biological anthropologists, we focused for this study on non-biological anthropologists.

We aimed to ascertain what the similarities and differences in views on race and the use of various traits to characterize races were between: (1) Academic community of biologists versus cultural anthropologists (i.e., the groups which markedly differed in their acceptance/rejection of race in the American studies). (2) Academic communities of biologists of two independent countries, yet having similar post-World War II history after having fallen into the same sphere of ideological influences. (3) Academic communities of biologists and anthropologists versus ordinary people/ lay public who, as Atran (1990) and Hull (1998) believe, tend to view the perceived variations of the living world, including humans, essentialistically. (4) Ordinary people of an 'Eastern' – postsocialist homogeneous society with no day-on-day experience with human biological and cultural diversity versus those of a 'Western' postcolonial heterogeneous (multicultural) society – in countries with and without race policies. Of particular interest to us in this study was whether or not human diversity is perceived in racial terms, and upon which factors the nature of this perception depend.

Materials and Methods

Studies were conducted on several occasions on five groups of participants over a period of three years (between 2012 and 2014). The groups included respondents of European ancestry from three countries: Poland and Czech Republic (East-Central Europe) and England. The sample consisted of the academic community (university teachers and students) of two disciplines – biology and cultural anthropology, as well as ordinary people with at least a secondary education, of varying professions unconnected to anthropology or biology. A description of the sample is presented below:

- Polish ordinary people (POLISH) inhabitants of a university city in west-central Poland and surrounding area. These included: public administration employees; clerks of a financial department, secretariats and technical staff of one of the universities; students of the Academy of Music and pedagogy plus a group of their peers; and Polish Army staff. In total, 151 persons were surveyed over the period 2012–2014.
- 2) English ordinary people (ENGLISH) mainly inhabitants of a university city and a few towns and villages of Kent county (south-east England). In total, 90 persons were surveyed over the period 2013–2014.

- 3) Polish academic community of ethnologists/cultural anthropologists (PL CULT) professors and students of one of the leading universities in west-central Poland, and a few respondents from other Polish large academic centers. In total, 104 persons were surveyed in 2014.
- 4) Czech academic community of biologists (CZ BIOL) – professors and students of biology, biochemistry and biomolecular research of a university in Moravia and researchers at the university museum, as well as some scholars from four other university centers in the Czech Republic. In total, 109 persons were surveyed in 2012.
- 5) Polish academic community of biologists (PL BIOL) – professors and students of various branches of biology: environmental, experimental, molecular and biotechnology of one of the leading universities in westcentral Poland, and (fewer in number) biologists of another large university in central Poland. In total, 131 persons were surveyed over the period 2013–2014.

In sum, nearly six hundred (*N*=585) respondents from the five above-mentioned groups were polled. Studies were conducted by means of closed-answer surveys and carried out in two ways: The first was by distribution of a paper questionnaire; the second – by means of an anonymous on-line survey. Each language group received the questionnaire in their native language. These consisted of several questions; the content of the survey is given below.

- 1) Are there [biological] races in humans? (with yes/no alternatives).
- Select racial characteristics by which races differ from one another (with yes/no responses to the range of traits). Items 1–5 were related to traditional morphological traits, namely:
 1. skin color, 2. color and shape of eyes, 3. shape of face, 4. shape of nose, and 5. body height. Items 6–10 were related to other characteristics, such as: 6. religion, 7. personality, 8. intelligence, 9. sports ability, and 10. susceptibility to diseases.

 How many human races can be identified? (with three answers: • Few – at least three; • Difficult to say – there are many races; • There are no races – our species is one human race).

It should be emphasized that although in asking questions about human races we did not give a definition of the term, for Eastern Europeans (both for biologists and ordinary people) the term 'race' implies groups defined by biological criteria. The term 'race' in England, although replaced with the term 'ethnic group', is at its core nevertheless still rooted in biology (the contents of high-school textbooks are described later in the text). The final section of the questionnaire consisted of items relating to the respondent's socio-demographic data: sex (for all groups), age and education level (for ordinary people), as well as academic status (for academic communities), reflecting both age and educational level. Survey participant characteristics are summarized in Tab. 1.

A chi-square (χ^2) statistic (maximum likelihood) was used for testing relationships between categorical variables. In this study, a dependence was sought first between the response and demographic data within each group of respondents (within-group differences), and then between the response and individual groups (between-group differences). Data were analyzed using *Statistica* for Windows 10 software package (StatSoft Inc.) and Microsoft Excel. For all tests, p < 0.05 (two-tailed) was taken as statistically significant.

Results

Existence and number of races

Within-group differences. We first analyzed the influence of sex, age, education level and academic status within each group of respondents on their opinions on the existence and the number of human races into which people can be divided. Both groups of ordinary people (Polish and English), having a very different sociopolitical history, were completely homogeneous in their perception of race and demographic characteristics. No dependence was found either

| GROUP | TOTAL | | SEX | | AGE* | | EDUCATION | |
|-----------------------|-------|----|-------------|-------------|----------------|-------------|---------------------|-------------|
| | N | % | М | F | YOUNGER <40 | OLDER >40 | SECOND./ COLLEGE | UNIVERSITY |
| 1. Polish lay people | 151 | 26 | 69 (46%) | 82 (54%) | 89 (59%) | 61 (41%) | 77 (51%) | 74 (49%) |
| 2. English lay people | 90 | 15 | 43 (48%) | 47 (52%) | 30 (38%) | 50 (62%) | 40 (45%) | 48 (55%) |

| Tab. 1 - Survey participant characteristics: | Sample sizes (N) and proportions (%) of five groups by |
|--|--|
| demographic data. | |

| | | | | | STATUS | STATUS | | |
|------------------------------------|-----|-----|-------------|-------------|-----------------|-----------|--|--|
| | | | | | STUDENT PRO | OFESSOR | | |
| 3. Polish cultural anthropologists | 104 | 18 | 48 (46%) | 56 (54%) | 74 (71%) (29 | 30 9%) | | |
| 4. Czech biologists | 109 | 19 | 46 (42%) | 63 (58%) | 56 (51%) (49 | 53 9%) | | |
| 5. Polish biologists | 131 | 22 | 49 (37%) | 82 (63%) | 85 (65%) (35 | 46 5%) | | |
| Total (N) | 585 | 100 | | | | | | |

*Age: younger <40 years, and older >40 years. The age of respondents ranged from 20–72, with the median age being 32 years (Polish) and 18–77 years, with the median age being 44.5 years (English).

between: - respondents' sex and the answers (the opinion of men did not differ from the opinion of women), - respondents' age and the answers (the opinions of older people did not differ from those of younger people), or - respondents' educational level and the answers (the opinion of people with secondary education did not differ from that of people with university education).

Both groups of biologists (Polish and Czech) from the neighboring countries were also homogeneous in their perceptions of race and demographic characteristics. No dependence was found between respondents' sex or academic status and their opinions on race – that is, the opinion of men did not differ from that of women, and the opinion of students did not differ from that of their professors. Within the group of Polish cultural anthropologists only one statistically significant dependence was found – between the respondents' sex and their

answers to the question whether there are races in humans – with more women answering in the affirmative (89:11%) than men (65:35%) (χ^2 =8.60, p=0.003).

Between-group differences. We then analyzed the responses between the various groups of respondents. All groups were fairly concordant in their views on the existence of races, with the vast majority in agreement. The rates of acceptance of human races varied from 92 percent for both groups of ordinary people to 77 percent for the group of Polish cultural anthropologists (Fig. 1) – this difference was found to be statistically significant, as was that between Polish ordinary people and Polish biologists. There was no significant difference between the disciplines (Polish biologists vs. Polish cultural anthropologists), nor between countries (Polish biologists vs. Czech biologists).

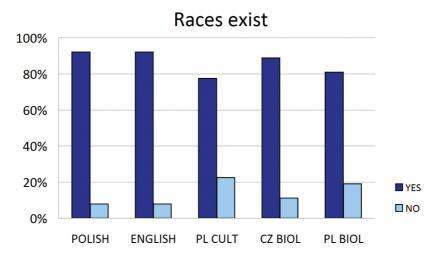


Fig. 1 - Percentages of the five groups of respondents answering the question on whether there are races in humans. The colour version of this figure is available at the JASs website.

On the question of the number of human races that can be identified, the opinions of the surveyed groups of respondents were discordant (Fig. 2). The responses for questions on whether human races exist and the number of races broken down by the groups of participants are summarized in Tab. 2. Although for all groups from Eastern Europe the predominant perception was that there exists only a few (at least three) human races, the proportions between them differed considerably: from 78 percent for Polish ordinary people to 40 percent for Polish cultural anthropologists (χ^2 =39.48; p=.00000). Only for the group of English ordinary people was the opinion that there are many human races predominant (64%). The third option - 'our species is one human race' was the least often selected - here opinions varied from 25 percent for Polish cultural anthropologists to seven percent for Polish ordinary people. Taken together, the opinions of both groups of ordinary people differed significantly from the three other groups as well as between each other (Polish vs. English ordinary people χ^2 =95.51; *p*=.00000). On the other hand, there was no significant difference between Polish biologists and Polish cultural anthropologists, or between Polish biologists and Czech biologists.

Supposed racial characteristics

In regard to survey question no. 2 (characteristics by which races differ from one another), the opinions of all groups of respondents were largely concordant, showing the same response patterns (Fig. 3), although the proportions of those answering 'yes' and 'no' differed (all of the differences between the largest and smallest values were statistically significant). Thus, racial differences were seen for all of the morphological characteristics (traits 1-5) and also for susceptibility to diseases (trait 10). Three characteristics (traits 6-8): religion (cultural), personality (behavioral) and intelligence (mental) were not chosen as being racially determining traits by the majority of respondents. Sports ability (trait 9) was the only variable for which respondents' opinions were discordant. The three groups without a biological education mostly disagreed that human races differ in sports ability, while both groups of biologists mostly agreed with it.

Discussion

Academic community on the existence of races

Lieberman and colleagues in their 1980s survey showed that US biologists were much

| GROUP | POLISH | | ENGLISH | | PL CULT | | CZ BIOL | | PL BIOL | |
|----------|--------|----|---------|----|---------|----|---------|----|---------|----|
| | Q1 | Q3 | Q1 | Q3 | Q1 | Q3 | Q1 | Q3 | Q1 | Q3 |
| Agree | 92 | | 92 | | 77 | | 89 | | 81 | |
| Disagree | 8 | | 8 | | 23 | | 11 | | 19 | |
| - few | | 78 | | 16 | | 40 | | 50 | | 54 |
| - many | | 14 | | 64 | | 35 | | 38 | | 27 |
| - no/one | | 7 | | 20 | | 25 | | 11 | | 19 |
| Ν | 151 | | 90 | | 104 | | 109 | | 131 | |

Tab. 2 - Percentage of five groups of respondents answering questions about races in humans (Q1: Are there races? and Q3: The number of races). Explanations of group abbreviations: PL CULT – Polish cultural anthropologists; CZ BIOL – Czech biologists; PL BIOL – Polish biologists.

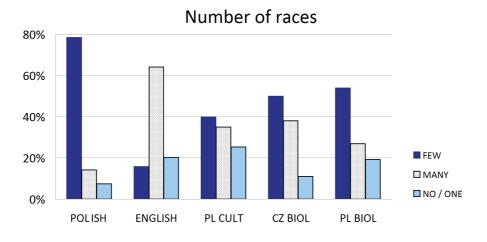


Fig. 2 - Percentages of the five groups of respondents answering the question on the number of human races that can be identified. The colour version of this figure is available at the JASs website.

more likely than biological anthropologists, and even more likely than cultural anthropologists, to accept the existence of biological races in the human species (approx. proportions: 3/4 vs. 1/2 vs. 1/3, respectively), and provided possible reasons for the dissimilarities between these disciplines. They suggested that the rates of acceptance/rejection of the race concept vary "not only with the degree of commitment of a discipline to biological theory and/or cultural theory, but also with the degree of familiarity with the debate over race and the clinal data, [and] the utility of the concept for that field" (Lieberman & Reynolds, 1996, p. 159).

For the Polish academic community of biologists and cultural anthropologists, however, contrary to their US counterparts, the discipline was shown to be unimportant in differentiating the

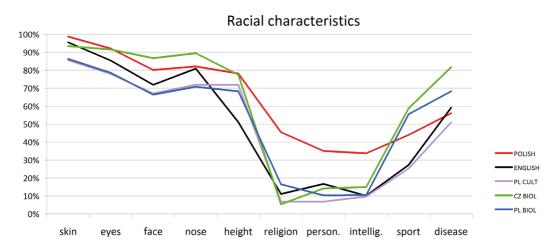


Fig. 3 - Percentages of the five groups of respondents that considered the below characteristics as race-based differences. The frequency of affirmative answers ranged between: (1) skin color 99–86%, (2) color and shape of eyes 92–78%, (3) shape of face 87–66%, (4) shape of nose 89–71%, (5) body height 78–51%, (6) religion 5–45%, (7) personality 7–35%, (8) intelligence 10–34%, (9) sports ability 25–59%, and (10) susceptibility to diseases 82–51%. The colour version of this figure is available at the JASs website.

responses. Therefore, on one hand, the difference between the US (surveyed in 1999) and Polish cultural anthropologists (surveyed in 2014) in regard to their disagreement on the existence of human races is very large (80% vs. 23%, respectively). On the other hand, there was not much difference in the rate of race rejection between the US, Czech and Polish biologists (12% vs. 11% vs. 19%, respectively), although the time difference between the first and two other surveys is almost 30 years.

Polish cultural anthropologists. How can such a large difference in views on race between Polish and the US cultural anthropologists be explained? Kaszycka *et al.* (2009), suggested that the views of academics on race are influenced by several factors, amongst others: sociopolitical and historical, different traditions of anthropological schools, and educational. Scholars in Eastern Europe during the communist period were isolated and unable to freely exchange ideas with their colleagues on the other side of the Iron Curtain. Moreover, anthropological schools in Europe and the US have different traditions. While American anthropology has been organized as a four-field holistic discipline composed of biological and cultural anthropology, archaeology and linguistics, in Europe, including Poland, cultural anthropology/ethnology, being part of humanities, is entirely a non-biological discipline. Polish cultural anthropologists therefore, drew their knowledge of races from physical anthropologists and their textbooks. However, Polish physical anthropology academic textbooks, the most thorough being published years ago (Malinowski & Strzałko, 1985), have never advocated the non-existence of races.

As Gravlee (2009) noticed that while in the US, race, as a biological concept, was rejected by a large proportion of anthropologists, the debate over race as a socio-cultural construct shifted to, and dominated, the social sciences. This, however, did not happen in Poland. For example, Nowicka (2009) – author of a popular current Polish cultural anthropology textbook, which has had several editions – gives a very unclear message on the matter of race and concludes that "for contemporary cultural anthropology, the issue of race is of no great significance" (p. 224). Only for some time now, has race as a cultural

construct appeared in Polish social, or cultural studies writings either through these authors who experienced a scholarship stay in the US (Rokicki, 2002; Mincer, 2012), or via Polishtranslated books which include chapters on race (Eller, 2012; Salzman & Rice, 2009). Still, however, the knowledge of the academic community of Polish cultural anthropologists about race is, as shown in this study, very scanty.

Polish and Czech biologists. We now discuss the possible reasons for the similar perception of the concept of race among zoologists in the US and biologists from Eastern Europe. In Lieberman et al.'s (1992) opinion, subsequent to the intense discussion that arose from challenging the subspecies category by Wilson & Brown (1953), debate around the 'subspecies problem' in zoology became more sporadic, resulting in a lack of widespread change in American biologists' views about race. Besides, Edward O. Wilson himself would later state in his book Naturalist that he and Brown had then "overstated" their case and that "the subspecies category is often a convenient shorthand" (Wilson, 1994, p. 208). It may not be surprising, therefore, that the majority of biologists, regardless of country of education, specialization and generation, in not having dealt with human clinal data and employing the zoological definition of race (Mayr, 1969), accept the concept, equating races in humans with those in animals. Our survey seems to confirm this supposition - the rates of acceptance for the questions on whether there are races for animals and races in humans show roughly comparable results: 84 vs. 89 percent in the case of Czech biologists, and 93 vs. 81 percent for Polish biologists.

For Czech and Polish biologists neither 'race', nor the 'non-existence of human races' are topics of interest, education, or discussion, though Czech anthropologists once gave this matter some attention (Budil *et al.*, 2005). In Poland, most of undergraduate and graduate programs do not include the topic of race in their curricula. In fact, the issue of what race is and what it is not constitutes only a small part of the individual modules taught at only two biology faculties.

Respondents on the number of races and their characteristics

Generations of people assumed that races were real and understood as units of intraspecific classification. The 18th and 19th century pioneers in defining human races believed that there were a few races: Carolus Linnaeus identified four, Johann Blumenbach - five, Georges Cuvier - three. Although later researchers, facing difficulties in classifying all modern populations into discrete categories, created divisions into dozens of racial types, the initial classifications into three to five major races still seems the most widely accepted. As the present survey has shown, this view is held by those who live in largely homogeneous societies, such as Poles and Czechs. Conversely, the English, who live in a biologically and culturally heterogeneous society, widely accept a multiplicity of races.

That races differ in physical traits, such as skin color and skull morphology, has been known from the earliest descriptions of Linnaeus or Blumenbach. But racial differences have also been described in regard to: behavior, personality, aptitude, IQ, brain size, health, blood groups, mental ability, reproductive strategies, and others, such as sport performance. These claims have been disputed or refuted as pseudoscientific, biased, misinterpreted, or manipulated (e.g., Gould, 1978, 1981; Osborne & Feit, 1992; Bagley, 1995; Lewontin, 1996; Marks, 1996, 2000; Lieberman, 2001), while the study of the heritability of intelligence, as even fraudulent (Kamin, 1974). Newer publications, however, which legitimize such claims still appear (e.g., R. Herrnstein & C. Murray, V. Sarich & F. Miele, N. Wade), and although vastly criticized in science (e.g., Armelagos, 1995; Harpending, 1995; Muntaner et al., 1996; Marks, 2014), are strengthening the popular belief that races are the natural, biological units of the human species (Caspari, 2010).

<u>Schooling and education – comparative perspec-</u> <u>tive.</u> People's views are, to a large extent, shaped by schools, the media and society (families, peer groups, etc.), and this is the case with their 'knowledge' of races. To the question of 'where your information about races comes from?', the most frequently mentioned sources by the Polish students were schools and their textbooks, as well as the media – Internet and TV channels (Małczyński, 2010; Kaszycka, unpublished data). Lieberman *et al.* (1992), in discussing the issue of college science education in the US between 1930s–1980s, identified the two main channels for distribution of formal knowledge to students – textbooks and teachers. The authors stated that students, however, did not learn much about race from biology textbooks – earlier college textbooks presented human races as fact; those published later often ignored the topic.

Morning (2008), focusing on a wider level of the US education, and examining high-school biology textbooks spanning 1952-2002, pointed to three stages in views on race. In the early 1950s, humans were divided into three major races, then subdivided into several sub-races, after which detailed typological descriptions were added. In the mid-1970s, humans were divided into five major races without further subdivisions and typological description. From the late 1990s, biology textbooks rarely listed 'racial groups', shifted the importance from phenotype to genotype (Morning, 2008), and, probably following current trends in medical publications, linked races with genetics, health and disease (e.g., Wood, 2001; Risch et al., 2002; Burchard et al., 2003, but see e.g., Schwartz, 2001; Braun, 2002; Cooper et al., 2003). On the other hand, anthropology and sociology high-school textbooks present the concept of race as a social construct (Morning, 2011).

Data on the common understandings of race in the US was presented by Condit *et al.* (2004) and Dubriwny *et al.* (2004), although their method employed focus group discussions, and ours participant survey answers. Dubriwny *et al.* (2004) reported that lay people from the south-eastern United States identify race by a person's color, geography, genetics, and culture, while there was a low number of linkages of religion to race, which concurs with the findings of our study (see Fig. 3). Understanding of race by lay people in the south-eastern US varied, however, between participants of European and African origin (Dubriwny et al., 2004). While both groups placed the same emphasis on genetics and geography in defining race, European-Americans focused also on color and other physical characteristics, whereas culture was as important for African-Americans. Condit et al. (2004) enquired of the participants whether they perceive attributes such as: 'physical abilities', 'mental abilities', 'illness', and 'personality traits' to vary by racial group - some of which partially, others completely, corresponding with our survey questions. The number of mentions in this US study was higher for the first three attributes, while lower for the fourth, suggesting that people taking part in the study tend not to think of at least personality as being associated with race. Kohn (1995) earlier showed that the proportion of whites believing blacks to be less intelligent varies between the surveys. Although it is not possible to directly compare Condit et al. (2004) and our results, there was also a tendency by most of the respondents in our study to reject that race is defined by 'intelligence' and 'personality'. In saying that, we exclude the possibility that these particular responses might have been biased for fear of being "politically incorrect", as the surveys were anonymous, and furthermore, over 30 percent of Polish ordinary people agreed on an association between race and intelligence (for four other groups of respondents this percentage oscillated between 10-15).

Eastern Europeans on race. In Poland the term 'race' (as a biological category) became rooted both in natural history nomenclature and colloquial language, and it is used as an ordinary word. On studying the contents of high-school textbooks (in Poland, 89% of population at age 18 graduate from secondary school) spanning the years 1994–2016, we have found that the topic of human races, although no longer being taught in biology classes, has been transferred to geography classes. Some geography textbooks, when describing a diversity of people in the world, provide definitions of race based on

morphological traits, and, almost all - both in Poland (e.g., Wiking educational portal, 2005) and in Czech Republic (e.g., Současný svět, 2004) - a tripartite classification: white (Europoid), yellow (Mongoloid), and black (Negroid), plus three mixed races: mestizo, mulatto and zambo. In some textbooks, races are called varieties, in others - geographic races. Occasionally major races are further divided into varieties, or types, e.g., the 'black' race being divided into African and Australian varieties. It is with such knowledge that Polish high-school graduates usually finish their natural sciences education (about 50% continue education at various universities), believing that there is a set of distinct races, and that diversity equals race.

On asking Polish senior high school and/ or university students (Małczyński, 2010; Kaszycka, unpublished data), US students (Lieberman & Rice, 1997), or lay American people (Condit et al., 2004), to list examples of races, they firstly list three groups based on skin color, such as 'white', 'black', 'yellow' (Polish students may also add 'red'). In second place Polish students give examples of races based on geography/continents: Asians, Europeans, Africans (or Afro-Americans!) and, in addition, American Indians. The least frequent are examples based on nations, ethnic groups, religion, or languages (just as for the US students [Lieberman & Rice, 1997]). These surveys demonstrate that students in general possess the same popular notion about race and human diversity.

Race in England. What can be said of the perceptions of race, and their determinants, by English (of European ancestry) ordinary people? Over 80 years ago, two influential British scholars – Julian Huxley and Alfred Haddon (1935), responding to the rise of fascism in Europe, suggested that it would be desirable to replace the term 'race' with 'ethnic group'. And although their idea was then also propagated in the US by Ashley Montagu (1942), this view came later to be applied in Britain. Since 1991 the UK decennial census, in trying to determine the size and characteristics of minority populations, has asked a question on ethnicity (Jivraj, 2012; Simpson, 2014). Although it was designed as a pragmatic and publicly acceptable approach for measuring diversity, the question causes confusion. Understandings of ethnicity vary, Ballard (1996) mentioned that often it is used as a euphemism for the discredited race concept. Aspinall (2012) has drawn attention that the UK census' question itself has little to do with ethnicity, as the answer formats employ color labels such as 'white' and 'black'. Others point out that although the concepts of ethnicity, race and nationality have certain distinctions in academic research, there are also interconnections between them, as each represents a form of identity with the idea/belief of a common ancestry (Fenton, 2003; Eriksen, 2010).

Britain, once the largest colonial power in the history of the world, has become a "superdiverse" country - as estimated by the Office for National Statistics in 2008/9 the UK was home to 51 foreign country of birth groups, each comprising of at least 25,000 people (Aspinall, 2012). With such heterogeneity, it is unsurprising that English ordinary people perceive human diversity differently than their counterparts in largely homogeneous Poland or Czech Republic, stating that there are many races. In Britain, however, 'race' is an ambiguous term (Ellison et al., 2017), and became a word rarely used in the public sphere, except when referring to the Race Relations Act, racial discrimination, multiracialism, etc. According to Banton (2005), the average Londoner may not have a clear idea of what is meant by 'race' (though they may be aware that the term has a number of meanings), and is likely to look for appropriate clues, which might be the physical appearance or social class of the interlocutor, as expressed by anything he/ she says, including pronunciation. The question then arises: after quite a number of years of public policy of avoiding the use of the word 'race' and its replacement with the term 'ethnic group', has this influenced the views of English ordinary people about human diversity?

Two elements suggest that ordinary people may indeed be confused. First, when analyzing the answers to questions no. 1 and 3 of our survey (Tab. 2), it appears that the English were the only group of respondents in which we found a discrepancy. Only seven persons answering the question 'Are there races in humans?' stated that there were no races, but then for the question 'How many human races can be identified?', 18 selected 'our species is one human race'. The second element comes from the analysis of a sample content of a student A-level Geography textbook (Baker et al., 2008). In the chapter Contemporary conflicts and challenges one reads: "Current scientific research suggests that most modern humans are descended from three main racial types..." (p. 250). This suggests that races existed in the past, which is contrary to what is shown by the genetic evidence - Europeans, Asians and Africans were never divergent or separated, and human races were never 'pure' (Templeton, 1998, 2013). Ethnicity is described in the textbook (Baker et al., 2008) as: "the grouping of people according to their ethnic origins or characteristics. In narrow terms it describes the racial make-up of a population ..." (p. 232), which suggests that race, as biology, is the core of ethnicity.

One of the definitions on the Oxford Dictionaries website (2018) also equates 'race' with an 'ethnic group'. Kertzer & Arel (2002, p. 13) explicitly state that the case of Britain is a vivid example of the "failure to distinguish race from ethnicity". Interestingly, as Fenton (2003) notices, opposite to the US where ethnic groups are associated with 'whiteness' (and detecting the European waves of migrations), in Britain they are associated with 'non-whiteness'. When asking English ordinary people whether there are races in humans, or to select racial characteristics, their opinions are largely concordant with the views of Eastern European groups of respondents (which may confirm what Wade [2004, p. 162] had suspected - that "many people actually continue to think about race in terms of physical, biological differences"), even though the proportion of those answering 'no' was lower for several characteristics than that of Polish ordinary people.

Conclusion

We have provided quantitative data on how the Eastern European academic community of biologists and cultural anthropologists, and Polish and English ordinary people view race. We have demonstrated that human diversity is still perceived largely in racial terms (with quite a strong belief on the existence of races) irrespective of age, sex, level of education, status, scientific discipline, or the society lived in (regardless of whether homogeneous or heterogeneous). We have found that a vast majority of the participants perceive human races in a 'traditional' way as defined by a set of morphological traits, but mostly tend not to consider intelligence, personality and religion as group/race-based. We have tried to find the factors and the nature on which this perception depends. We have arrived at the conclusion that this is largely a consequence of educational factors (amongst others, teaching of stereotypes in schools), and an unfamiliarity with the fact that in light of modern anthropological and genetic research the concept of 'biological race' is impossible to sustain.

It would be useful in Europe to institute public educational programs such as the American Anthropological Association, "RACE: Are We So Different?" (Jones *et al.*, 2007; Goodman *et al.*, 2012), operating for over a decade now in the US, or the French Musée de l'Homme temporary exhibition (2017–2018) "Us and them: From prejudice to racism" (*http://nousetlesautres. museedelhomme.fr/en*). It would also be interesting to ascertain the extent to which these projects have changed the public understanding of race. Several studies have shown that students' views towards race can indeed be altered via scientific education (Hart & Ashmore, 2006; Štrkalj *et al.*, 2006).

In the face of today's political climate and mass migrations that have led to the renewal of nationalisms, xenophobia and racism, we believe that the time has come to reintroduce 'race' into the anthropological discourse, especially in Eastern Europe. Several essays on "what is race today?" (Goodman, 2017) in a number of Western European countries recently appeared on pages of the JASs forum (e.g., Destro Bisol et al., 2017; Ellison et al., 2017; Heyer, 2017; Kattmann, 2017). Subsequently, in Italy, on the 80th anniversary of the Italian racial laws of 1938 enacted by the Fascist regime, the Manifesto of Human Diversity and Unity was proclaimed (Manifesto, 2018), while the French in 2018 removed the word 'race' from the country's constitution (https://www.connexionfrance. com/French-news). We found it desirable to have international scholars come together to explore ways of promoting the current anthropological perspective on race and human variation. The first steps in implementing this vision have been taken with the organization of a panel: "Deconstructing race: Biological or social concept?", being held at the International Union of Anthropological and Ethnological Sciences (IUAES) 2019 Inter-Congress in Poznań, Poland. We expect the next steps (conferences, publications) will follow soon, as awareness building is crucial.

Acknowledgements

Author (KAK) wishes to acknowledge the contributions of her students: Karolina Kaszuba, Marta Matyla and Marta Bukowska in collecting the data. I also thank Celeste Condit, Peter Wade, Tadeusz Mincer and Michał Buchowski for personal communications, Piotr Małczyński for making his Master's thesis available, Petr Tureček and Dorota Boyle for their assistance in locating the relevant Czech and English school textbooks, and all respondents of the questionnaires.

This article is dedicated to the memory of Professor Jan Strzałko.

References

- Armelagos G.J. 1995. Race, reason, and rationale. (Book reviews). *Evol. Anthropol.*, 4: 103–109.
- Aspinall P.J. 2012. Answer formats in British Census and survey ethnicity questions: Does open response better capture 'superdiversity'? *Sociology, 46: 354–364.*

- Atran S. 1990. Cognitive Foundations of Natural History: Towards an Anthropology of Science. Cambridge University Press, Cambridge.
- Bagley C. 1995. A plea for ignoring race and including insured status in American research reports on social science and medicine. *Soc. Sci. Med.*, 40: 1017–1019.
- Baker A., Redfern D. & Skinner M. 2008. AQA A2 Geography. P. Allan Updates, Oxfordshire.
- Ballard R. 1996. Negotiating race and ethnicity: Exploring the implications of the 1991 Census. *Patterns Prejudice*, 30: 3–33.
- Banton M. 2005. Genomics and race. Anthropol. Today, 21: 3–4.
- Brace C.L. 1964. On the race concept. *Curr. Anthropol.*, 5: 313–320.
- Braun L. 2002. Race, ethnicity, and health: Can genetics explain disparities? *Perspect. Biol. Med.*, 45: 159–174.
- Budil I., Blažek T.V. & Sládek V. (eds) 2005. Dějiny, rasa a kultura. Sbornik prispevku z interdisciplinarniho symposia o problematice ras [History, Race and Culture. Proceedings of the Interdisciplinary Symposium on Race Issues]. Dryada, Plzeň.
- Burchard E.G., Ziv E., Coyle N. *et al.* 2003. The importance of race and ethnic background in biomedical research and clinical practice. *N. Engl. J. Med.*, 348: 1170–1175.
- Caspari R. 2010. Deconstructing race: Racial thinking, geographic variation, and implications for biological anthropology. In Larsen C.S. (ed): A Companion to Biological Anthropology, pp. 104–123. Wiley-Blackwell, Chichester.
- Caspari R. 2018. Race, then and now: 1918 revisited. Am. J. Phys. Anthropol., 165: 924–938.
- Condit C.M. 2007. How culture and science make race 'genetic': Motives and strategies for discrete categorization of the continuous and heterogeneous. *Lit. Med.*, 26: 240–268.
- Condit C.M., Parrott R.L., Harris T.M. *et al.* 2004. The role of 'genetics' in popular understandings of race in the United States. *Public Underst. Sci.*, 13: 249–272.
- Cooper R.S., Kaufman J.S. & Ward R. 2003. Race and genomics. *N. Engl. J. Med.*, 348: 1166–1170.

- Destro Bisol G., Danubio M.E., Allovio S. & Papa C. 2017. Anthropologists, Italians and "human races". *J. Anthrop. Sci.*, 95: 291–297.
- Dubriwny T.N., Bates B.R. & Bevan J.L. 2004. Lay understandings of race: Cultural and genetic definitions. *Community Genet.*, 7: 185–195.
- Eller J.D. 2012. Antropologia kulturowa. Globalne siły, lokalne światy [Cultural Anthropology. Global Forces, Local Lives]. Wyd. Uniwersytetu Jagiellońskiego, Kraków.
- Ellison G.T.H., Aspinall P.J., Smart A. *et al.* 2017. The ambiguities of "race" in UK science, social policy and political discourse. *J. Anthrop. Sci.*, 95: 299–306.
- Eriksen T.H. 2010. *Ethnicity and Nationalism. Anthropological Perspectives*. Pluto Press, London.
- Fenton S. 2003. Ethnicity. Polity Press, Cambridge.
- Goodman A.H. 2010. Why genes don't count (for racial differences in health). *Am. J. Public Health*, 90: 1699–1702.
- Goodman A.H. 2017. What is race today? Scientific, legal, and social appraisals from around the globe. *J. Anthrop. Sci.*, 95: 281.
- Goodman A.H., Moses Y.T. & Jones J.L. 2012. *RACE: Are We So Different?* Wiley–Blackwell/ American Anthropological Association, Chichester.
- Gould S.J. 1978. Morton's ranking of races by cranial capacity: Unconscious manipulation of data may be a scientific norm. *Science*, 200: 503–509.
- Gould S.J. 1981. *The Mismeasure of Man*. Norton, New York.
- Graves J.L. Jr. 2004. The Race Myth: Why We Pretend Race Exists in America. Plume, New York.
- Gravlee C.C. 2009. How race becomes biology: Embodiment of social inequality. *Am. J. Phys. Anthropol.*, 139: 47–57.
- Harpending H. 1995. Human biological diversity (Book reviews). *Evol. Anthropol.*, 4: 99–103.
- Hart D. & Ashmore P. 2006. Changing students' understanding of race. *Anthropol. News*, 47: 10–11.
- Heyer E. 2017. Race and racism in France. J. Anthrop. Sci., 95: 307–310.
- Hull D.L. 1998. Species, subspecies, and races. *Soc. Res.*, 65: 351–367.

- Huxley J.S. & Haddon A.C. 1935. *We Europeans: A Survey of 'Racial' Problems*. Jonathan Cape, London.
- Jivraj S. 2012. *How has ethnic diversity grown 1991-2001-2011? Dynamics of Diversity: Evidence from the 2011 Census.* Centre on Dynamics of Ethnicity (CoDE), University of Manchester.
- Jones J., Overvbey M.M., Goodman A.H. et al. 2007. RACE: A Teacher's Guide for High School. American Anthropological Association, Arlington, VA.
- Kamin L.J. 1974. *The Science and Politics of IQ.* L. Erlbaum Associates, *New York*.
- Kaszycka K.A. & J. Strzałko. 2003a. 'Race' Still an issue for physical anthropology? Results of Polish studies seen in the light of the U.S. findings. *Am. Anthropol.*, 105: 116–124.
- Kaszycka K.A. & J. Strzałko. 2003b. Race: Tradition and convenience, or taxonomic reality? More on the race concept in Polish anthropology. Anthropol. Review, 66: 23–37.
- Kaszycka K.A. & G. Štrkalj. 2002. Anthropologists' attitudes towards the concept of race: The Polish sample. *Curr. Anthropol.*, 43: 329–335.
- Kaszycka K.A., Štrkalj G. & Strzałko J. 2009. Current views of European anthropologists on race: Influence of educational and ideological background. Am. Anthropol., 111: 43–56.
- Kattmann U. 2017. Reflections on "race" in science and society in Germany. J. Anthrop. Sci., 95: 311–318.
- Keita S.O.Y. & Kittles R.A. 1997. The persistence of racial thinking and the myth of racial divergence. *Am. Anthropol.*, 99: 534–544.
- Kertzer D.I. & Arel D. 2002. Censuses, identity formation, and the struggle for political power. In Kertzer D.I. & Arel D. (eds): *Census* and Identity. The Politics of Race, Ethnicity, and Language in National Censuses, pp. 1–42. Cambridge University Press, Cambridge.
- Kohn M. 1995. *The Race Gallery: The Return of Racial Science*. Jonathan Cape, London.
- Lewontin R.C. 1972. The apportionment of human diversity. *Evol. Biol.*, 6: 381–398.
- Lewontin R. C. 1996. Of genes and genitals (Book review). *Transition*, 69: 178–193.
- Lieberman L. 1968. The debate over race: A study in the sociology of knowledge. *Phylon*, 29: 127–141.

- Lieberman L. 2001. How 'Caucasoids' got such big crania and why they shrank. *Curr. Anthropol.*, 42: 69–95.
- Lieberman L., Hampton R.E., Littlefield A. *et al.* 1992. Race in biology and anthropology: A study of college texts and professors. *J. Res. Sci. Teach.*, 29: 301–321.
- Lieberman L. & Jackson F. 1995. Race and three models of human origin. Am. Anthropol., 97: 231–242.
- Lieberman L., Kaszycka K.A., Martinez Fuentes A.J. *et al.* 2004. The race concept in six regions: Variation without consensus. *Coll. Antropol.*, 28: 907–921.
- Lieberman L., Kirk R.C. & Littlefield A. 2003. Perishing paradigm: Race – 1931–99. *Am. Anthropol.*, 105: 110–113.
- Lieberman L. & Reynolds L. 1978. The debate over race revisited: An empirical investigation. *Phylon*, 39: 333–343.
- Lieberman L. & Reynolds L. 1996. Race: The deconstruction of a scientific concept. In Reynolds L.T. & Lieberman L. (eds): *Race and Other Misadventures: Essays in Honour of Ashley Montagu*, pp. 142–173. General Hall, Dix Hills.
- Lieberman L. & Rice P.C. 1997. Races or Clines? In Rice P.C. (ed): General Anthropology Division Modules in Teaching Anthropology (Module 2). American Anthropological Association, Arlington.
- Lieberman L., Stevenson B.W. & Reynolds L.T. 1989. Race and anthropology: A core concept without consensus. *Anthropol. Educ. Q.*, 20: 67–73.
- Livingstone F. 1962. On the non-existence of human races. *Curr. Anthropol.*, 3: 279–281.
- Malinowski A. & Strzałko J. (eds). 1985. *Antropologia* [Anthropology]. Wyd. Naukowe PWN, Warszawa.
- Małczyński P. 2010. *Recepcja idei "rasy" w świadomości potocznej* [Reception of the Idea of "Race" in Common Consciousness]. M.A. Thesis, Wrocław University.
- Manifesto of Human Diversity and Unity. 2018. https://sites.google.com/uniroma1.it/the-manifesto-2018/the-manifesto-2018
- Marks J. 1996. The legacy of serological studies in American physical anthropology. *Hist. Philos. Life Sci.*, 18: 345–362.

- Marks J. 2000. Review of Taboo. *Hum. Biol.*, 72: 1075–1078.
- Marks J. 2014. Review of *A Troublesome Inheritance* by Nicholas Wade. *Hum. Biol.*, 86: 221–226.
- Mayr E. 1969. *Principles of Systematic Zoology*. McGraw-Hill, New York.
- Mincer T. 2012. Kulturowe rozumienie pojęcia rasy [Cultural Understanding of the Concept of Race]. *Prace Kulturoznawcze*, 14: 115–128.
- Montagu A. 1942. *Man's Most Dangerous Myth: The Fallacy of Race.* Columbia University Press, New York.
- Montagu A. 1962. The concept of race. Am. Anthropol., LXIV: 919–928.
- Morning A. 2008. Reconstructing race in science and society: Biology textbooks, 1952–2002. *Am. J. Sociol.*, 114: S106–S137.
- Morning A. 2011. *The Nature of Race: How Scientists Think and Teach About Human Difference.* University of California Press, Berkeley.
- Mukhopadhyay C. & Moses Y. 1997. Reestablishing 'race' in anthropological discourse. Am. Anthropol., 99: 517–533.
- Muntaner C., Nieto F.J. & O'Campo P. 1996. The Bell Curve: On race, social class, and epidemiologic research. Am. J. Epidemiol., 144: 531–536.
- Nowicka E. 2009. *Antropologia. Świat człowieka Świat kultury* [Anthropology. World of Human World of Culture]. Wyd. Naukowe PWN, Warszawa.
- Osborne N.G. & Feit M.D. 1992. The use of race in medical research. *J. Am. Med. Assoc.*, 267: 275–279.
- Oxford Dictionaries website. 2018. https:// en.oxforddictionaries.com/definition/race
- Risch N., Burchard E., Ziv E. *et al.* 2002. Categorization of humans in biomedical research: Genes, race and disease. *Genome Biol.*, 3: comment 2007.1–2007.12.
- Rokicki J. 2002. Kolor, pochodzenie, kultura: Rasa i grupa etniczna w społeczeństwie Stanów Zjednoczonych Ameryki [Color, ancestry, and culture: Race and ethnic group in the society of the United States of America], TAiWPN Universitas, Kraków.
- Salzman P.C. & Rice P.C. (eds) 2009. *Myśleć jak antropolog* [Thinking anthropologically: A practical guide for students]. GWP, Sopot.

- Schwartz R.S. 2001. Racial profiling in medical research. N. Engl. J. Med., 344: 1392–1393.
- Simpson L. 2014. How have people's ethnic identities changed in England and Wales? *Dynamics* of Diversity: Evidence from the 2011 Census. Centre on Dynamics of Ethnicity (CoDE), University of Manchester.
- Současný svět [Current world]. 2004. Herink, J. & Valenta V. Nakladatelství České geografické společnosti, Praha.
- Štrkalj G., Gibbon V.E. & Wilkinson A.T. 2006. Teaching human variation: Can education change students' attitudes towards 'race'?" *Glasnik Etnografskog instituta SANU Belgrade*, LIV: 253–258.
- Templeton A.R. 1998. Human races: A genetic and evolutionary perspective. *Am. Anthropol.*, 100: 632–650.
- Templeton A.R. 2013. Biological races in humans. Stud. Hist. Philos. Biol. Biomed. Sci., 44: 262–271.

- Wade P. 2004. Human nature and race. *Anthropological Theory*, 4: 157–172.
- Wagner J., Yu J-H., Ifekwunigwe J.O. *et al.* 2017. Anthropologists' views on race, ancestry and genetics. *Am. J. Phys. Anthropol.*, 162: 318–327.
- Wiking educational portal. 2005–2008. Geografia, człowiek na Ziemi [Geography, Human on Earth]. Accessed [7.18.2018]. http://www.wiking.edu.pl/article.php?id=148
- Wilson E.O. [1994] 2006. *Naturalist*. Island Press, Washington, D.C.
- Wilson E.O. & W.L. Brown Jr. 1953. The subspecies concept and its taxonomic application. *Syst. Zool.*, 2: 97–111.
- Wood A.J.J. 2001. Racial differences in the response to drugs – Pointers to genetic differences. *N. Engl. J. Med.*, 344: 1394–1396.

Associate Editor, Alan Goodman



This work is distributed under the terms of a Creative Commons Attribution-NonCommercial 4.0 Unported License http://creativecommons.org/licenses/by-nc/4.0/