STUDENTS' CONCEPTIONS OF INTELECTUAL ROLES AND THE EFFECTS OF HIGHER EDUCATION

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Abstract. The link between intellectuals and higher education has never been clear-cut in the past, but nowadays this relationship seems to be made more complicated by notions of the mass higher educational system, the changes in the functions of universities, the utilitarian expectations of students, the features of the labour market and the new emphasis on social stratification. In this study we attempt to describe students' conceptions regarding intellectual roles and also the effects of higher educational institutions with the help of quantitative research (N=1502). A substantive block of questions was used during this analysis. The scientific literature delineates the possible roles of intellectuals (i.e. professionals, public intellectuals or the intelligentsia). The location of our study is Hungary so this latter type of role can also be important because this type refers to the societies of Eastern Europe. However, the utilitarian expectations and the dominance of a labour-market oriented attitude predict a mixed pattern of students' conceptions of intellectual roles. The empirical findings verified these mixed patterns in which the professional and classical elements are significant. We can identify the fields which may shape these conceptions. The impacts of the institutional effects seem to be more significant than the effects of

sociodemographic variables and some disciplines significantly shape the conceptions as well.

Keywords: higher education, intellectuals, institutional effects, institutional socialisation

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Introduction

The goal of this study is to describe two phenomena firstly, full-time students' conceptions of intellectual roles, and secondly, the effects of institutions in this field. These issues are embedded in the theoretical debates about intellectuals (whether it is possible to be a public intellectual nowadays, the role of professionals, etc.), the transformation of universities (whether universities can train intellectuals after the expansion of higher education) and the transmission of critical thinking. The latter topic is in close relationship with the entire system of democracy and people's attitude towards public life and civil movements. The location of our analysis is Hungary. The subject of this research can be linked to institutional socialisation and to socialisation processes in early adulthood. In the theoretical section, three points are in focus: the elements of intellectual roles, the role of the universities in the training of intellectuals and the main features of the Hungarian situation. These issues (intellectuals, public functions, critical functions, etc.) show us specific patterns in Central and Eastern Europe. In the empirical part of our analysis, based on a novel block of questions we created, we describe the system of (socio-economic and institutional) variables which can form students' concepts of intellectual roles. Our most important research questions regard the type of effects which have been perceived by students inside universities (professional, public intellectual, etc.) and whether we can find the effects of these perceptions in students' role components.

The elements of intellectual roles

Several functions are linked to the social groups of intellectuals (creating theories, public life, critical attitudes, shaping or leading social processes, etc.), but in the past few decades these functions have changed. Economic, social, disciplinary, and theoretical elements have all contributed to this transformation (Reul, 2005; Hudson, 2005; Bauman, 1991; Russel, 2000; Haney, 2008).

The literature generally distinguishes between three main possible roles, which refer to a special geographic location or historical context. The phrase 'intellectuals' was first used in the late 19th century (Brym, 2015), but the emergence of this social group is dated earlier – for example, Le Goff (1993) places the origin of modern intellectuals' ancestry in the Middle Ages. The process of modernisation makes these people's presence more significant, in a similar way to the expansion of education or the press. The scientific revolution brought about special segments of intellectuals which belong primarily to science and engineering. This group has been called *professionals*. Expertise has got a central role for them, while elements of morality seem to be present less significantly. They have a special mission in the field of state development and institutional decisions. Disadvantages in the process of modernisation have led to the emergence of a unique type of intellectuals in Central and Eastern Europe which is called *intelligentsia*. The goal of these people is to moderate the disadvantage, lead this entire process, and have a strong critical attitude towards the state. Ideas are also very important elements for this role model. Contemporary literature generally uses another: the *public intellectual*. The latter type takes part in public life and civil movements; it is the typical actor of democracies and mainly belongs to the Western world.

Since definitions are diverse and, as we have mentioned, every society has got their own groups of intellectuals, this social group is not homogenous; therefore, we cannot collect role elements which are common across countries. Nevertheless, if we study the literature, we can collect the most frequently used elements. Some elements relate to knowledge (general knowledge, expertise,

the transmission of these elements, and of course the source of this knowledge (Ettrich, 2007). A special sliver of role models refers to moral statements and truth. Deep faith is an idea which has had a close relationship with intelligentsia. The attitude towards morality has changed due to postmodern theories, which has shaped the role of intellectuals according to Bauman (1991). Intellectuals' impact on society is another very important element. This plays a central role for members of the intelligentsia, who would like to transform the entire society. The transformation of public life is significant among public intellectuals. Some approaches highlight that intellectuals, instead of sitting in their ivory tower, should play a public role which can interlock different social groups and should spread the knowledge. In conclusion, intellectuals can be a role model in their narrow or broader environment. In some theories, they have a critical function to lead public debates in the different channels of mass communication. This activity is mainly about communication for public intellectuals. In the debate on the possibilities of current public intellectuals, some scholars emphasise their limited possibilities (Russel, 2000; Fleck et al., 2006) and others the transformed situations (Drezner, 2009). The phenomenon of habitus is a key topic to investigate. We can identify its elements (e.g., language, behaviour) and the related routines (activities in the field of culture, consumption of cultural products). In addition, there is a debate on whether intellectuals are the part of their classes, are "free-floating", or are embedded in their social networks (Brym, 2015). Nevertheless, independence is a crucial element of some approaches. Through their position as outsiders, intellectuals can function as the "conscience" of society.

The effects of universities

The impacts of universities are still closely related to the socialisation process within the higher education institution (Weidman, 2006). These changes are hard to measure and, because these elements do not belong to the quantitative, short-term, and measurable aspects of higher education, they can remain

hidden. According to Weidman (2006), we can state that several factors can shape the institutional socialisation process, but the extent of students' integration is one of the most important. If the extent of integration into the campus is greater, the transmission of the intellectual role components can be more significant. We regard the academic staff as role models who have their own effects on students in the classroom during the teaching process, and outside the classroom, as well. Of course, peer-group effects also play a central role, but these effects are not equivalent to the formal aims of the institutions in every case. The social networks of students also determine the extent of their integration into the campus. Implicitly, the university is not the only source of the various components of intellectual roles. Students with an intellectual background can acquire behavioural elements from their parents or the networks of their families, but every scene of socialisation offers similar patterns (secondary school, media, organisations, etc.). If we analyse the contents of the transmitted elements, we can identify the parts which correspond to the role components (general knowledge, expertise, behavioural components, networks, etc.) shown earlier.

The transformation of universities to become mass higher education institutions can obviously shape the entire system. Based on the dominance of applied research projects, we suppose a higher level of control (Bok, 2003) and the phenomenon of utilitarianism (Panton, 2005), which generate the foreground of professional elements in the field of role models. According to Berács (2014), the marketisation of the higher education system became typical in Central and Southeast Europe after 1990, and economical collapse had a key role in this process. According to Russel (2000), lecturers have also transformed: they are 'manager professors' first and not intellectuals, so they cannot transmit the elements of public intellectual life to such an extent. The changed forms of teaching and exams do not scale ideas and critical thinking (Gunter, 2012). Nevertheless, some training courses and disciplines are saturated with more moral elements

and behavioural components. The transmission of moral elements is increasingly connected to activities outside the classroom. If we analyse the transmission of moral elements and ideas, we need to keep in mind that the expansion of higher education was mainly the result of economic demands, so certain elements of transmitted knowledge were transformed into practical skills and the essence of disciplines seem to have vanished (Panton, 2005). This professionalisation has also got a negative effect on the interest in issues at the macro social level (Lagermann & Lewis, 2012). There is a wide debate about the question of academic freedom (Lynch & Ivancheva, 2015). Novel limitations may affect the role elements which belong to freedom and democracy. In conclusion, we suppose that, in the case of transmitted elements, professional role components are overrepresented at today's universities.

Intellectuals and their role components in Hungary

Mazsu (2012) provides a history of Hungarian intellectuals. The most important features are similar in Central and Eastern Europe due to the comparable economic or social situation. Modernisation started during the 19th century in Hungary, which implied an increasing demand for people with a higher education degree and expertise in several fields of economy and culture. The features of intelligentsia frequently contained elements of nationalism and the aim of modernisation. Most of these people came from the nobility but the bourgeoisie in cities also contributed a significant proportion. Due to the special structure of society, this new social group was enclosed by the two main sections of society, namely the traditional and modern sections. The division, which was also observable in the field of ideology, cut this social group in two. According to Kristóf (2011), this division was typical during the entire 20th century as well as after the Millennium. Political polarisation is relatively strong, and it divides intellectuals into political left and right. The period of socialism was interrupted by this division, resulting in a 'new class' of intellectuals (Szelényi, 1990).

According to Brym (2015), non-intellectual elite groups must control intellectuals continuously, which limits the changes in the field of politics. During the socialist system, the practice of critical or public functions were controlled, often illegal or hidden, so the entire life of intellectuals was uncertain. At the same time, intellectual groups emerged during the socialist system which stayed in close relationship with the state and filled different functions in the field of management and leadership (Ettrich, 2007). Auer (2006) emphasises that intellectuals have been more sedate in some political situations, but if they can create a 'public space' around them, it can generate a wide range of freedom. After the fall of socialism, the group of intellectuals became more diverse: previous technocrats, repatriates from the West, intellectuals from the hidden 'public space' were mixed. Market economy obviously raised the importance of professional role components and the high rate of unemployment in the young cohort around the Millennium introduced a practical approach towards higher education.

According to research data, Hungarian young people are less interested in politics (Oross, 2013), which can imply a change in the elements of public intellectuals' roles and their waning presence. According to Szabó (1990), the roots of this passive attitude go back in time to the previous period, namely to socialism, because formal institutions rather alienated people from public or political activities. This can shape the importance of critical and public functions.

The current study

In this quantitative analysis, we describe students' conceptions of intellectual roles as well as the effects of higher educational institutions. The novelty of this paper lies in the methodology because quantitative techniques are used, whereas the analysis of intellectuals usually contains theoretical approaches only. We created our own block of questions to describe the emphatic elements of role models, their embeddedness in socio-cultural variables, and the effect of

institutions in these fields. We also intend to reveal the features of different disciplines: the literature interconnects certain disciplines with special traits and values (e.g., social sciences with critical thinking, arts with moral elements). We try to identify the respective effects of these variables in a linear regression model to answer our questions.

We wish to reveal the link between these two fields and give an overview of the factors that can form students' role components. Our hypotheses are the following:

H1: we suppose the dominance of "professional" role components in students' conceptions as well as among institutional effects, according to the transformation and professionalisation of universities and the students' utilitarian attitude towards higher education according to Bok (2003), Panton (2005) and Berács (2014).

H2: we suppose that their conceptions of intellectual roles have been shaped by socio-demographic, institutional, and disciplinary elements at the same time according to Weidman (2006). According to the literature, the outputs of institutional socialisation are embedded in these fields.

Method

Our empirical data come from a nationwide quantitative research project carried out in Hungary ("Family and Career" project – led by Ágnes Engler in 2017). The aim of the research project was to describe the students' conceptions of gender roles, child-rearing and students' parenting (Engler, 2018). The question block dealing with intellectual roles is found on the last page of the questionnaire. The number of respondents was 1502. The respondents came from 11 higher educational institutions in Hungary (three from Budapest and seven from other cities: Eötvös Loránd University, Semmelweis University, University of

Debrecen, Óbuda University, University of Nyíregyháza, University of Szeged, University of Pécs, Eszterházy Károly University, Szent István University, Debrecen Reformed Theological University, and Kaposvár University).

The type of the sampling was stratified and the aspects of the sampling were the following: regions of the country, the size of the institutions and disciplines. The population consists of full time students in BA, MA and combined courses, i.e., courses combining a BA and an MA programme (except first year students in BA and combined courses). The leaders of the research project chose the institutions on the basis of the disciplines offered by the universities, and the locations of the universities. Law and economics are classified as social sciences, and informatics as engineering. Medicine also included nursing. In the case of teacher training courses, disciplines were determined according to the field of study (e.g., a literature teacher was classified as studying humanities). This encoding was used during the whole research project.

Instrument

We have created a block of questions with 18 items which discover the role components of intellectuals. These items were based on the literature (definitions of intellectuals, the possible roles (professionals, public intellectuals, etc.)) and we tried to cover every segment of the intellectual life and roles concerned. The respondents evaluated the items on a four-grade scale (e.g., expertise, analysis of social notions, intellectual independence, high culture activities, preservation of national culture, benevolence and beauty etc.). The appendix contains the block of questions ($\alpha = 0.812$)

Another block of questions analysed the effects of higher education institutions on intellectuals' roles with the same items (except for two items which could not be interpreted from this perspective). Students evaluated the effects of their institutions on a four-grade scale – using this method we tried to identify the most important segments of the influences ($\alpha = 0.812$) Economic capital was measured by an index which indicates 10 consumer goods in the family.[1)] The

techniques used were the following: means, factor analysis and a linear regression model.

The independent variables were gender, the type of the settlement, the parental educational level (mother and father separately), objective economic capital, the type of training course and scientific fields in linear regression model. Gender was used as a dichotomous variable (1= man, 0= woman). The parental educational level was used as a continuous variable (with the number of completed years of education – most parents attended higher education before the Bologna system, so completing a college course was coded as 16 years of education, and a university course as 17.). Dummy encoding was used by the type of settlement (reference category: smaller cities), disciplines (reference category: Agronomy) and the type of course (reference category: bachelor course). The factors of institutional effects were used as a continuous variable (with the help of factors).

Results

Sample

The proportion of women in the sample was 56%. Most respondents attended bachelor's courses (10 percent were in master's courses or were senior students from combined courses). If we go through the subsamples of the disciplines, engineering, medicine, and humanities are the most populous subsamples (N = 388, 277, and 266, respectively). The second lowest number is theology (N = 55). The number studying agriculture was too low to use the data (N = 26), so during the linear regression model the latter subsample was used as the reference category. The mean of the objective economic capital index was 7.26 (*SD* = 1.649). Overall, 10 items were used with a maximum value of 10 and a minimum of 0 in the whole sample (0= not possessed by the household, 1= possessed by the household). Some 30% of fathers and 38% of mothers have a degree. The proportion of low-educated parents (below graduation) is 27.4% for fathers and 16.2% for mothers. Of all students, 9.4% come from the capital city,

19% from a county seat, 45.8% from a smaller city, and 25.5% from villages and farms.

Conceptions and institutional effects

The reliability of the block of questions was tested (the score of Cronbachs'-alpha was .812 and the lowest score among the items was .792, so every item was retained). Our first step was to analyse the mean of the items (Table 1).

On the basis of our empirical findings we can model the students' conceptions of intellectual roles. It is clear that it is a mixed pattern in which the professional and classic intellectual elements (benevolence and beauty, education) are dominant. The items of criticism, the elements of public intellectual life and the macro-level effects are less important. The moral component ("Benevolence and beauty") seems to be far from the postmodern attitude, and the low level of critical and public intellectual functions can be explained by a dissonant relationship of Hungarian young people with policy and politics. The reproduction of knowledge comes at the second half of the list. Szelényi (1990) supposed the importance of the role-components of the intelligentsia in Central Eastern Europe four decades ago, but these empirical findings foreshadowed a lack of this attitude on a macro level in the future. The location of the effects on intellectuals has only been the narrow environment of the individual (see the position: "Being a role model. Improving the local community and society"). According to the literature, we supposed the dominance of professional elements based on the theories which analyse the transformation of universities (Panton, 2005; Bok, 2003; Lagermann & Lewis, 2012). However, our empirical findings show us a different and more diverse picture. The elements of ideas, moral contents, and independence can modify this preconception.

Table 1. Contents of intellectuals' roles (with a four-grade scale)

	M	*SD*
Competence in the field of your own discipline	3.47	0.65
Benevolence and beauty	3.33	0.73
General knowledge	3.30	0.67
Degree, adequate educational level	3.28	0.78
White-collar work	3.22	0.72
Being a role model. Improving the local community and society.	3.14	0.83
Independence (from institutions and politics)	3.11	0.82
Knowledge of specialist literature	3.00	0.77
Spreading and using research findings. Improving society.	2.99	0.79
Preservation of national identity and culture	2.95	0.84
Consumption of high culture	2.86	0.81
Contribution to and spreading of European and/or global culture. Setting up international relationships.	2.80	0.84
Mediation between social groups or pressure groups	2.78	0.83
Analysing and criticizing social phenomena	2.77	0.88
Taking part in public affairs and fulfilling public functions	2.74	0.77
Creating scientific or artistic products	2.56	0.90
Participating in public debates and having a presence in the media	2.43	0.92
Controlling authority, criticizing and taking part in a demonstration	2.30	0.96

Note. N = min. 1208 per row.

Table 2 describes institutional effects in the field of intellectual roles (the value of Cronbachs'-alpha was .822 and the minimum value was .806). As we have mentioned, 16 items were used in this case. The institutional effects have a mixed pattern too, and professional and classic elements are intermingled. Macro-level items are located at the end of the list. We can identify the specific aims of institutions in the higher position given to "Creating scientific or artistic products". Earlier empirical findings highlighted the utilitarian needs of students in Hungary (Veroszta, 2010). Although the literature emphasises the transformation of universities towards professional elements, this table points out the institutions' more complex effects on students. The role components of public

intellectuals seem to be of minor importance (which refers to the theory by Russel (2000)), but the decline of moral elements cannot be verified.

Table 2. Institutional effects in the fields of intellectual roles (with a four-grade scale)

	M	*SD*
Competence in the field of your own discipline	3.2	0.7
Knowledge of scientific literature	3.0	0.8
Benevolence and beauty	2.9	0.9
General knowledge	2.8	0.8
Being a role model. Improving the local community and society.	2.7	0.9
Spreading and using research findings. Improving society.	2.7	0.8
Independence (from institutions and politics)	2.6	0.9
Consumption of high culture	2.5	0.8
Creating scientific or artistic products	2.5	0.9
Analysing and criticizing social phenomena	2.5	0.9
Preservation of national identity and culture	2.5	0.9
Mediation between social groups or pressure groups	2.4	0.9
Contribution to and spreading of European and/or global culture. Setting up international relationships.	2.4	0.8
Taking part in public affairs and fulfilling public functions	2.4	.93
Participating in public debates and having a presence in the media	2.1	0.9
Controlling authority, criticizing and taking part in demonstration	2.0	0.9

Note. N = min. 1208 per row.

The patterns of factors

With the help of the items, four factors were created in the field of role components (public intellectual, moralist and nationalist, knowledge-oriented, habitus-based). Maximum likelihood method and varimax rotation were used. We were able to retain 11 items. It is an important fact that the critical and public intellectual functions are interlocked and the moral elements belong to the national component (Table 3).

Table 3. The factors of role components regarding intellectual life

	Public intellectual	Moralist and nation-alist	Knowledge-oriented	Habitus-based
Competence in the field of your own discipline	-.095	.212	**.324**	.220
General knowledge	.181	.099	**.973**	.102
Taking part in public affairs and fulfilling public functions	**.551**	.162	.169	.048
Participating in public debates and having a presence in the media	**.777**	-.020	-.083	.024
Consumption of high culture	**.384**	.086	.098	**.512**
Knowledge of specialist literature	.069	.130	.091	**.639**
White-collar work	.020	.325	.095	**.458**
Being a role model. Improving the local community and society.	.158	**.523**	.086	.227
Analysing and criticizing social phenomena	**.454**	.217	.016	.161
Benevolence and beauty	.037	**.637**	.110	.075
Preservation of national identity and culture	.187	**.536**	.056	.136

Note. $N = 1502$. The extraction method was maximum likelihood method with varimax rotation. $KMO = .0.750$. Factor loadings above .30 are in bold. The value of explained variance was 43.401%.

The factors of the institutional effects are shown in Table 4. We can include 12 items in the model and these items present an interesting picture of the role of institutions. The students had to classify to what extent their current course is preparing them for intellectual role components. The public-oriented factor can be easily interpreted. The "helper and mediator" factor includes the items of local community, helping attitude, mediation between social groups, and national culture. The "professional and research-oriented" factor stays closer to the concept of a research university and to the features of the professional ideal but it also contains the "consumption of high culture" – so this is not a clearly commercialised and market-oriented institutional effect.

Table 4. The factors of institutional effects on intellectual roles

	Public-oriented	Helper and mediator	Professional and research-oriented
Competence in the field of your own discipline	-.060	.263	**.436**
Taking part in public affairs and fulfilling public functions	**.675**	.251	.128
Participating in public debates and having a presence in the media	**.818**	.155	.130
Consumption of high culture	**.355**	.274	**.472**
Knowledge of scientific literature	.022	.174	**.567**
Creating scientific or artistic products	.296	.108	**.526**
Being a role model. Improving the local community and society.	.206	**.627**	.175
Independence (from institutions and politics)	.209	**.430**	.175
Benevolence and beauty	-.044	**.678**	.271
Preservation of national identity and culture	.255	**.539**	.194
Controlling authority, criticizing and taking part in demonstration	**.602**	.101	.011
Mediation between social groups or pressure groups	**.357**	**.518**	.140

Note. $N = 1502$. The extraction method was maximum likelihood method with varimax rotation. $KMO = .0.842$. Factor loadings above .30 are in bold. The value of explained variance was 42.520%.

The empirical findings of the regression model

Table 5 shows the empirical findings of the regression models. The moderate effects of socio-demographic variables present a very important result – we can find only two significant relationships for the "moralist and nationalist" and "knowledge-oriented" factors. There is a particularly strong influence exerted by humanities and theology on the "public intellectual" and "moralist and nationalist" factors, respectively. Institutional effects shape every segment of the conceptions. There are two negative significant relationships in the model: the "public oriented" institutional effect can alienate students from the "moralist and nationalist" and "knowledge oriented" factors.[2)]

Table 5. The regression model of conceptions regarding intellectual roles (beta values)

	Public intellectual	Moralist and nationalist	Knowledge-oriented	Habitus-based
	β	*β*	*β*	*β*
Constant	0.391	0.352	0.171	-.430
gender (1=man. 0=woman)	-.047	.084	.029	.066
Master's course (0=no, 1=yes)	.061	-.002	.044	.055
Combined course (0=no, 1=yes)	.021	.027	-.045	.059
Economic capital (with index)	.001	-.070	.012	.010
Type of settlement (dummy coding, ref.: smaller city)				
Village	.005	-.020	-.042	-.007
County town	.032	-.027	-.080	.084
Capital city	.048	.004	-.081	.045
Parental educational level				
Mother's educational attainment (with completed years of education)	-.061	.034	.054	-.017
Father's educational attainment (with completed years of education)	-.073	-.019	.003	.022
Disciplines (dummy coding, ref.: agronomy)				
Humanities	**.188***	.165	.070	.107
Social sciences	.077	.065	.066	.061
Science	.051	.068	.065	.065
Engineering	.118	.157	.004	.079
Medical Studies	.099	.135	.042	.010
Arts	.064	.044	-.060	.034
Theology	.028	**.168****	.023	.031
Factors of Institutional effects (with continuous variable)				

Institutional effect: public-oriented	**.461*** **	**-.174*** **	**-.242*** **	.023
Institutional effect: helper and mediator	.010	**.228*** **	**.097***	-.064
Institutional effect: professional and research oriented	.048	.040	**.195*** **	**.278*** **
Adj. R^2	.217	.122	.109	.067

Note. $N = 1502$, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Discussion

Our first hypothesis supposed the dominance of professional role components in students' conceptions. The main explanations were the mass higher education system, the students' utilitarian expectations, and the features of institutions (a market-oriented attitude, competitions, applied projects etc.). Our data confirmed the central position of professional elements, but this attitude integrated classical and moral components, as well. It is interesting that knowledge items (general knowledge, competence) are important, but the behavioural elements which help acquire them (high culture, scientific literature) have lower positions. Some features of this pattern evoke the phenomenon of the intelligentsia (Szelényi, 1990), but the scope of the intelligentsia seems to be narrower and focuses only on local communities today. Public intellectual and critical functions are weak and remain closely linked to the passive attitude of young people in Hungary towards politics, and also predicts a passive attitude of future Hungarian intellectuals. Independence has a lower position than white-collar work – we can relate these findings to the different opportunities for operationalisation and the theoretical approach of intellectuals (e.g., Brym, 2015). The attitude towards independence has certainly been shaped by the socialist system, as well. So our first hypothesis has been verified, but we need to supplement the professional elements with classical and moral features.

One set of differences between institutional effects and conceptions can be explained by the process of education and the role of universities in knowledge reproduction: professional elements are in leading positions and

"creating scientific and artistic products" is also favourably ranked. If we analyse the means of the items, the highest position is taken by general knowledge. This item has a central role in the field of conceptions but the efficiency of institutional transmission seems to be lower. Most respondents attend bachelor courses and these short (mainly three-year) courses offer limited possibilities to transfer general knowledge. The international embeddedness of institutions and the transmission of global elements seem to be less significant. The position of high culture consumption may be indicative of the transformed cultural milieu of the universities.

We can interpret the patterns of factors with the help of the literature. The first factor collects the elements of 'public intellectual' and the second mostly represents the 'intelligentsia'. It is very interesting that 'knowledge of specialist literature' is separated from the 'competence in the field of your own discipline' – so we cannot identify 'pure' professional behaviour because the earlier item refers to 'habitus-based' elements.

In the field of institutional effects, we can identify two factors which contain items related to the outside word, but the aims and tools are different. Interestingly, the 'consumption of high culture' has a relatively high valuation by the 'public-oriented factor', while moral elements ('benevolence and beauty') are significant for the 'helper and mediator' factor. The pattern of the third factor ('professional and research-oriented') is not equivalent with the pure form of marketisation and commercialism due to the item of high culture.

Our second hypothesis supposed that socio-demographic variables, disciplines, and institutional effects shape students' conceptions of intellectual roles. This hypothesis has not been verified because the effect of socio-demographic variables was negligible and the impact of disciplines was also weak (except for humanities and theology, which exert a significant effect). Students' conceptions of intellectual roles are mostly embedded in institutional effects. The 'professional and research-oriented' effect can enhance the values of 'habitus-based' and 'knowledge-oriented' conceptions, and the combination of

'helper and mediator' and 'moralist and nationalist' factors also seems to be clear. The highest beta value is linked to the interrelation of 'public-oriented' and 'public-intellectual' factors. Negative relationships can be found in two cases: if students perceive 'public-oriented' elements at a university, their attitude towards 'moralist and nationalist' and 'knowledge-oriented' conceptions will be opposing. A significant but relatively weak relationship can be found between the 'helper and mediator' effect and the 'knowledge-oriented' factor.

Conclusion

We must be aware of two facts: firstly, that the final role-components permanently crystallise only after labour market entry, and secondly, young people's attitudes towards intellectual roles can change during their early adulthood. The circumstances shaping these elements may alter, as well (labour market, politics, etc.), so these empirical findings cannot clearly predict the behaviour of Hungarian intellectuals in the future but can describe some likely behavioural patterns – and these patterns are not based on macro-level grounds.

Another very important lesson is the role of universities. We can state - based on the findings of the linear regression model - that institutional effects are significant in the area of the intellectuals' role. As for the effects of institutions in this field, this impact is wider than we would expect from the pure market-oriented or mass higher education system, and this pattern is relatively distant from the idea of a research university, as well. Currently, students' conceptions of intellectual roles cannot be described with professional elements only. Polónyi (2013), in his analysis of the contents of different versions of the "Law of Higher Education" in Hungary from the past three decades, highlights that professional and market-oriented elements have become dominant missions of universities (and other elements have disappeared) – but the truth is that universities operate in different ways. We can trace in conceptions and institutional effects the elements of moral improvements, general knowledge, or the improvement of local communities. Nevertheless, the elements of the 'public intellectual' seem to be

weaker – and this may predict a rather passive attitude towards public life in the future. As we have seen earlier, this form of intellectuals is not deeply rooted in Central and Eastern Europe.

Despite the fact that a lot of factors can limit the process of students' socialisation on campus (paid work, the duration of training courses is shorter, mass education, credit system, the pull effect of the labour market, etc.), universities can still be seen as a scene of the socialisation process and lecturers transmit more than mere pieces of professional knowledge – and the way students perceive these impacts and effects shapes their behaviour, thinking, and attitudes. Universities have to be aware of this fact and should consider its implications. Moreover, a significant part of the student body encounters this special cultural climate for the very first time when they enter campuses because they are first-generation students and do not have patterns which were brought from home.

With the use of qualitative techniques, the sources of these effects and the way they operate may become visible. In the future we plan to conduct focus group interviews with students (10 interviews) and interviews with lecturers (30 interviews) to try to cover those segments of intellectual roles and the socialisation process which we cannot yet interpret clearly at this stage of the research.

Limitations

Our research has got several limitations. Firstly, the block of questions we used was our own creation, so we do not have the chance for international comparison. Secondly, other scholars might have used other items during the operationalisation. This was a nationwide analysis but the Hungarian situation is special due to the semi-peripheral position of the country and its post-socialist features – nonetheless, the empirical findings can be more relevant in Central and Eastern Europe.

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APPENDIX

How important are the following factors in intellectual life? Please rate them on a four-grade scale. (1= not at all, 4= extremely)

	1	2	3	4
Competence in the field of your own discipline				
General knowledge				
Taking part in public affairs and fulfilling public functions				
Participating in public debates and having a presence in the media				
Degree, adequate educational level *				
Consumption of high culture				
Knowledge of scientific literature				
Creating scientific or artistic products				
White-collar work*				
Being a role model. Improving the local community and society.				
Independence (from institutions and politics)				
Analysing and criticizing social phenomena				
Benevolence and beauty				
Preservation of national identity and culture				
Contribution to and spreading of European and/or global culture. Setting up international relationships.				
Controlling authority, criticizing and taking part in a demonstration				
Spreading and using research findings. Improving society.				
Mediation between social groups or pressure groups				

*****If we analyse the effects of institutions these items were not used. (Please rate from one to four how your course prepares you for these elements of intellectual life.)

NOTES

1. Components of the index: Does the family have its own apartment or house, cottager or plot, a flat-screen television, a personal computer or laptop

with broadband internet access at home, a tablet or e-book reader, mobile internet (on the phone or computer), a dishwasher, an air-conditioner, and a smartphone or car?

2. The 'public intellectual' factor is equal to + 0.391 + 0.188 (HUMANITIES) + 0.461 (PUBLIC ORIENTED INTELLECTUAL EFFECTS). A significant regression equation was found F (19, 523) = 8.979, $p < .05$) with an adj. R^2 of .217. The 'moralist and nationalist' factor is equal to + 0.352 + 0.168 (THEOLOGY) – 0.174 (PUBLIC ORIENTED INSTITUTIONAL EFFECT) + 0.228 (HELPER AND MEDIATOR INSTITUTIONAL EFFECT). A significant regression equation was found F (19, 523) = 4.966, $p < .05$) with an adj. R^2 of .122. The 'knowledge-oriented' factor equal to + 0.171 – 0.242 (PUBLIC-ORIENTED INSTITUTIONAL EFFECT) + 0.97 (HELPER AND MEDIATOR INSTITUTIONAL EFFECT) + 0.195 (PROFESSIONAL AND RESEARCH-ORIENTED INSTITUTIONAL EFFECT). A significant regression equation was found F (19, 523) = 4.507, $p < .05$) with an adj. R^2 of .109. The 'habitus-based' factor is equal to -0.430 + 0.278 (PROFESSIONAL AND RESEARCH-ORIENTED INSTITUTIONAL EFFECT). A significant regression equation was found F (19, 523) = 3.056, $p < .05$) with an adj. R^2 of .067.

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