Project proposal title: Media Distortion Index

Acronym: MIDI

Principal Investigator (PI): Ljubisa Bojic

Research field of the Project: social psychology, media, communication

1. Excellence

1.1. Objectives

Today, social media are one of the most important channels of news sharing and consumption significantly changing the patterns of traditional public communication (<u>Kalsens & Larsson 2017</u>, <u>Chadwick 2006</u>, <u>Couldry</u>, 2005; <u>Carey 2008</u>; <u>McQuail 2010</u>; <u>Perse and Lambe</u>, 2016; <u>Curran and Hesmondhalgh 2019</u>). Despite their growing importance, social media are often blamed "as a hotbed of bad news" (<u>Park, 2015</u>). After a decade of joint efforts of social science scholars and data scientists to understand the spreading of emotions and behaviors in the online sphere, it is still not clear to what extent and in what ways social media affect emotional states and behavior of people (<u>Coviello et al., 2014</u>).

The *main objective* of the project is to contribute to the existing, rather limited and ambiguous knowledge on the effects of social media on emotions and emotional wellbeing of people, by employing an innovative research methodology. The gap in the existing knowledge that we particularly wish to address relates to the understanding how social media content created by powerful mass media companies (MMC) (e.g. inter/national TV and radio networks, newspapers and periodicals) and distributed via social networks affects the emotions of their followers. This general objective breaks down into the following 3 sub-objectives:

- 1. Basic (scientific) research objective of this project is to conduct a comparative online research with the aim of testing the hypothesis derived from the theory of emotional contagion (Hatfield et al. 1994) and theory of negativity bias (Rozin & Royzman, 2001) that negative emotions spread via social media contribute to the rise in negative emotions in a society. More precisely, we aim to explore to what extent and in what ways content of the MMC Twitter accounts influences the emotions of their followers.
- 2. Applied research objective of this project is to develop an online text analysis and visualization tool (Media Distortion Index MIDI web application) that will enable automatic monitoring and publishing of the media distortion index values (positive vs. negative emotions ratio across various categories/topics: society, politics, economy, health etc.) on a website (online platform). This online tool will provide journalists, policy makers, legislators, civil society organizations, academics and interested public a comprehensive comparative overview of the state of mass media reporting in 11 countries, which is essential when developing policies, legislation and good practices regarding media objectivity and accuracy. Beside the MIDI tool, the online platform will provide other important research related

resources (databases, scientific papers, policy reports/briefs and recommendations, infographics, teaching materials etc.) and tools (other data visualization tools) for academics, policy makers, journalists and civil society organizations.

3. Establishing Laboratory for Digital Sociometrics within the Institute for Philosophy and Social Theory that would maintain the MIDI web application and online platform after execution of the MIDI project. This Lab would be regional hub for digital sociometrics aimed at supporting international scientific community in their social media related research projects.

1.2. Concept and methodology

Key concepts

In this research project we draw on theories and findings of previous sociological and sociopsychological studies on the spread of emotions in the online context. We also consider the uneven power structures of the social media and the influence of the powerful media actors (mass media companies) on the computer mediated communication.

Earlier research has demonstrated that human emotions can spread through different social networks affecting physically distant actors, and this phenomenon is known as the emotional contagion (Hatfield et al. 1994, Pugh 2001, Hill et al., 2010). Recent studies show that emotions can also be transferred in online settings through computer mediated communication (Harris & Paradice 2007, Guillory et al. 2011, Dang-Xuan & Stieglitz 2012, Kramer et al. 2013). For example, Coviello et al. (2014) find that negative emotions expressed on Facebook are spread to other users, despite the fact that they do not directly relate to the event that struck the person that expressed negative emotions in the first place. Several other studies (Kramer, Guillory and Hancock (2014), Ferrara and Yang (2015), Tang at al. (2012)) find that manipulating posts on news feed can impact emotions of social network users.

Socio-psychological research has shown that negative emotions generally have stronger impact and elicit more intensive responses than positive or neutral stimuli. The potency of negative emotions is recognized within the theory of negativity bias (Rozin & Royzman, 2001, Baumeister et al. 2001) and explored in recent studies on computer mediated communication. These studies show that negative sentiment posting elicit more interaction on social media than those with positive emotions (Stieglitz & Dang-Huan 2012). Stieglitz and Dang-Huan (2014) suggest that political posts with more negative emotions are retweeted in greater extent than those with less negative emotions. Similar results by Kramer (2012) indicate that individuals that express negative emotions on Facebook impact their network of friends to do the same.

In this research project the socio-psychological theoretical approaches of emotional contagion and negativity bias are expanded with the sociological approach that considers the uneven distribution of power between the mass media companies represented on the social networks and the ordinary users.

In general, when debating the advent of new media, scholars usually tend to focus on its impact on traditional media (for example, <u>Larsson 2013</u>; <u>Rogstad 2016</u>; <u>Newman 2009</u>; <u>Atkinson and Kenix 2019</u>). Unfortunately, the inverse effects of the mainstream media on these new forms of communication remain fairly under researched. Nevertheless, recently, this topic has gained some interest among media researchers and the results suggest that the mass media might still have substantial power in setting the attention of the whole media sphere. For example, some authors (<u>Harder et al. 2017</u>) have argued that we need to introduce "news story" approach to track the way information spreads through the media sphere,

and that traditional media outlets on Twitter have a "vastly more agenda-setting influence than other actors do" (2017:275). Another study (Conway-Silva 2017) that analyzed 2016 US elections have found that, although Twitter as a platform is quite likely to break from "media gate keeping", its agenda still remains under the influence of traditional media. In a similar vein, Vargo et al (2015) have shown that, even though agenda salience on Twitter is more volatile when compared to mass media (due to its openness to real-time occurring events), the overall agenda was to large degree settled by the mainstream media.

In that regard, MIDI will try to supplement this ongoing shift of attention in studying the relation between traditional media and social media, but will also provide new avenues of research since affective and emotional nature of these complex relations – which at the heart of MIDI project proposal – has not been studied systematically.

Media Distortion Index (MIDI value) would be an indicator that will be methodologically defined during the execution of the MIDI project. Working definition for the MIDI value would be: ratio between positive and negative emotions expressed in Twitter posts of official mainstream media in one country at least 50 profiles and positive and negative emotions expressed in Twitter posts by random public profiles from the same country, at least 10.000 of them. Positive emotions are considered words with positive emotional connotation from scientifically accepted psychometric dictionaries. Negative emotions are considered words with negative emotional connotation from scientifically accepted psychometric dictionaries. MIDI values will be measured by specially designed web application for that purpose. MIDI value indicates the extent of disproportion between emotional state of Twitter users in one country and emotional state of official media also using Twitter. In other words, the main goal is getting an indicator of how well state of one society, or at least part of it that uses Twitter is represented by official media that use Twitter and whether there is impact between these two groups: official media and citizens Twitter users. MIDI web application would update graphs on the MIDI web site on daily level with new outcomes of automatic analysis so that these indicators will be accessible by the world wide community.

Methods

Earlier studies have used controlled experiments to test the influence of social media content on users' emotions (Centola 2010, Bond 2012; Kramer, Guillory and Hancock (2014). Although they have been able to discern certain causal mechanisms, this methodological approach is not particularly suitable due to the scale limitations, lack of external validity and above all - ethical concerns. Therefore, this research project will rely on nonexperimental methods that respects user privacy and anonymity (data will be anonymized and analyzed at an aggregate level). The research is designed to explore the relationship between the emotional content of the Twitter messages (explained in more details in the next section describing the MIDI software) of the mass media companies and the emotional content of the subsequent posts of their followers.

The main research hypotheses are stated as follows:

- 1. *Negativity bias hypothesis*: The MMC post more emotionally negative content than positive and neutral. We expect the negativity bias in MMC's Twitter postings due to the fact that negative content brings more attention, evokes stronger emotional responses, initiate more interactions and attracts more followers.
- 2. *Emotional contagion hypothesis*: Negative emotions expressed in the MMC's tweets affect the emotional states of the users which is manifested in more negative content in their Twitter posts. The statistical method of regression analysis will be used to test the hypotheses.

Data in this project will be gathered through the MIDI tool. The MIDI custom software will consist of three major components - psychometric dictionaries obtained through the Linguistic Inquiry and Word Count (LIWC), tailor-made analysis engine and the online presentation/visualization tool. The computerized text analysis and visualization components will be specifically developed to analyze communication from Twitter.

MIDI software will operate on the following principle - every word in the selected corpus of Twitter messages is classified into one of the preexisting categories, based on the psychometric dictionaries. LIWC psychometric dictionaries have been in development since 1992, and tests performed in dozen studies show that LIWC dictionaries may be used to accurately identify emotions in texts (Kahn, Tobin, Massey & Anderson, 2007; Alpers et al., 2005 according to Tausczik and Pennebaker 2009; Pennebaker et al. 2015). Thus far, LIWC dictionaries exist in 9 languages (English, French, German, Spanish, Portuguese, Italian, Dutch, Russian and Serbian). After going through all the words in the selected corpus of Twitter messages, MIDI software calculates the percentage of each category (e.g. positive vs negative emotion-related words ratio) and publishes the result on the online platform. In this research, data will be acquired from public social media profiles on Twitter (both the official Twitter accounts of MMCs and random users (followers of these accounts). MIDI software will be constructed to enable statistical analysis of the gathered data.

The main source of data for this project is the microblogging and social networking site Twitter. Twitter was launched in 2006, and now represents one of the largest social networking sites. It has about 330 million active data users worldwide. Twitter is a social network mostly used for news acquiring, sharing and discussion (Park, 2015, Stieglitz & Dang-Xuan 2013), and that is the primary reason why we chose this platform for the research. Another reason why Twitter would be used as the primary source of data for this project is technical as well as legal in nature. In contrast to Facebook and other social networks, Twitter provides public data and API access for research applications, without major restrictions.

The choice of the countries that will be included in the analysis limited with the capabilities of the web application and available psychometric dictionaries (so far 9 languages). Therefore, the pilot research will include all European countries that we have psychometric dictionaries for because of our specific interest in this area. These are Serbia, Spain, Italy, France, Portugal, Netherlands, the UK and Germany. Additionally we would include countries outside Europe with highest use of Twitter and specific ratio of mass media and social media. These are the USA, Brazil, Russia and Argentina. Thus total of 11 countries will be included in the first instance, but this could be expend to other countries where official languages are the 9 mentioned.

1.3. Ambition

The MIDI tackles the basic issue of user participation in the media and public sphere which continues to fundamentally change the modern mass society. The project will in that regard examine and illustrate the complex relation between often conflicting interests of on the one hand journalists (and their worldview), politics, business, civil society, and on the other hand "ordinary" users and consumers of new media platforms, whose voice has, at least formally, never been more heard. Effects of this process profoundly impact the way in which media communication is conceptualized today. Furthermore, practical tools that will be developed during the course of this project will strengthen capabilities of

Serbian general public to see through the often-unnoticed affective nature of modern media and biases produced through that affectivity and thus provide a more democratic and objective media sphere.

- · The ambitions outcome would be to get the scientific proof that mainstream media influence emotions of society members (social media users) though social media.
- · Such findings would be important for societies to understand responsibility of realistic reporting and consequences of negative news.
- We also aim at providing the scientific community with data for further analysis of media representation and exploration of its influence on the general public.
- · Finally we will ensure continuation of the MIDI project and initiate other scientific efforts and networking by founding the Laboratory for Digital Sociometrics at the Institute for Philosophy and Social Theory.

2. Impact

2.1. Expected impact

- · Given the methodology of the MIDI, researchers engaged on this project would learn and further develop their understating of big data, statistical analysis and information technology in general, which would stimulate their future work in this direction.
- · Media coverage and publications published by researchers working on this project would stimulate international scientific community and wider public in Serbia to engage on this important topic of representation and media distortion.
- · We expect additional young researchers joining us in further expansion of the topic as numerous results of quantitative analysis will be acquired and therefore lots of work needs to be done in writing different MIDI related publications.
- The scientific community will be provided with data that will enable them to do their own analysis therefore enriching the scientific community with new areas of research.
- · Most importantly as a result of our inquiries journalists and media may be stimulated to report more realistically while legislators would consider advices that are consequences of our scientific inquiries, thus advancing improvements of media laws.

2.2. Dissemination of results

- · MIDI website would be an international hub for live Media Distortion Index and thus both the public and professionals would be informed about media distortion and advised on how to use media critically and report more realistically.
- · International media will be informed about the MIDI so we can expect their reporting on the issue as the MIDI index would compare values in different countries thus informing us about where the media are more realistic and which societies express more positive or negative emotions.
- The MIDI will collect public social media posts from chosen geographical area
- Twitter API will be used for data collection.
- MIDI will comply with the ERC H2020 Guidelines on Ethics in Humanities and Social Sciences. Process of data gathering and storage will comply with GDPR-rules.

- Raw data will be made available to the scientific community on a monthly basis through the MIDI website.
- The MIDI data will be preserved on the MIDI website
- Server space and domain costs will be paid by the newly founded Laboratory for Digital Sociometrics at the Institute for Philosophy and social Theory in the years to come, thus making the live MIDI and archived results available to the international community.

When the MIDI website is finished we shall use both official social media profiles of the project and other means of communication (e-mails) to let mainstream media and the public about our findings. We would take part in interviews and reporting of international media in case of their interest.

3. Implementation

3.1. Credentials of PI and members of Project team

- · Principle Investigator has been engaged in social psychology research including the following topics: impact of media addiction on political participation, happiness research and social media analysis. Other team members have been focusing on social science, media studies, applied policies, data science and coding.
- · Expanding on qualitative research results is essential in the MIDI inquiry so that findings should be made close to both professional and wide public. For example, team member in charge of policies would help express research results for legislators so they can understand how to advance societies in that way. Other researchers should focus on society and repercussions of media but also in explaining findings for media literacy.

3.2. Implementation plan

Table 3.1. Members of Project team.

| ID | Name and family name | Scientific institution | Person- |
|----|----------------------|---|---------|
| ш | Name and family name | Scientific institution | months |
| PI | Ljubisa Bojic | The Institute for Philosophy and Social Theory, | 11.4 |
| | | University of Belgrade | |
| P1 | Srdjan Prodanovic | The Institute for Philosophy and Social Theory, | 9 |
| | | University of Belgrade | |
| P2 | Milan Urosevic | The Institute for Philosophy and Social Theory, | 9 |
| | | University of Belgrade | |
| P3 | Balsa Delibasic | The Institute for Philosophy and Social Theory, | 9 |
| | | University of Belgrade | |
| P4 | Jelisaveta Petrovic | Faculty of Philosophy, University of Belgrade | 0.6 |
| P5 | Petar Maric | Faculty of Technical Sciences, University of Novi | 7.6 |
| | | Sad | |
| | | Total person-months | 46.6 |

Table 3.2. Tasks.

| Task/subtask number | Task/subtask title | Start month | End month | Members of Project team | Person- months | Description |
|------------------------|---|----------------|--------------|--|-------------------|---|
| 1.0 | Creating MIDI web application | 1st | 6th | PI, P1, P2, P3 & P4. PI is the main software architect. | 19 | This application runs in the background of official MIDI website. It analyzes public social media posts of random social media members (one group) and official media (second group) in 11 counties thus making outputs in terms how many words are registered daily relating to different psychometric categories. |
| 1.1 | API | 1st | 2nd | P5 (coding), P3 & PI | 6.3 | This is part of the web application which gathers data from Twitter. |
| 1.2 | Algorithm | 3th | 4th | P5 (coding), P2 & PI | 6.3 | This is part of the web application which analyzes data. |
| 1.3 | Output | 5th | 6th | P5 (coding), P2 & PI | 6.3 | This part of the web application provides results of the analysis including databases for further processing by researchers and live graphs to be embedded within the website. |
| 2.0 | Creating the MIDI website | 6th | 12th | PI, P1, P2, P3 & P5 | 6.5 | Significant part of the MIDI website present findings for both professional and wider public assisting them in use and production of media content as well as related legislature. Tasks below are provided accordingly. |
| 2.1 | Live Media Distortion Index graphs for 11 countries | 6th | 12th | P5 and PI | 1.1 | Page concerning the MIDI should be created with live graphs embedded within them. |
| 2.2 | Content for scientists | 6th | 12th | P5 and PI | 1.1 | Page with data bases. Scientists will be able to download data |

| 2.3 | Media literacy – content for wider public | 6th | 12th | P5 & PI | 1.1 | bases for their own research projects. This page will be constantly updated each month with new data. Educating wider public how to use media more critically |
|-----|--|-----|------|------------------------|-----|--|
| 2.4 | Tips for journalists based on our findings | 6th | 12th | P5 & P1 | 1.1 | Journalists should portray society in realistic manner. This section is intended to help them in this quest. |
| 2.5 | Advices for legislators | 6th | 12th | P5 & P3 | 1.1 | Special section of the website will expand in terms of how to change laws in an effort to make more realistic media. |
| 2.6 | Advices for Public Broadcasting Corporations | 6th | 12th | P5 & P2 | 1.0 | Advices on what Public Broadcasting Corporations can change in their programs to get more realistic media. |
| 3.0 | publishing scientific publications | 6th | 12th | PI, P1, P2, P3 & P5 | | Analyzing raw data in statistical software to extract significant correlations together with other parameters and translate this into scientific papers, conference papers etc. Publish both raw data and out coming papers on the MIDI website. Every member of the team is assigned to focus on few countries related to which data is analyzed. These counties are presented as subtasks below. |
| 3.1 | Monograph | 6th | 12th | P5 & PI as editor | 1.1 | Joining all the research results of the MIDI project |
| 3.2 | Serbia | 6th | 12th | P5 & P1 | 1.1 | Data extraction, analysis, writing and publishing in journals, scientific conferences and on the MIDI website. |
| 3.3 | The USA | 6th | 12th | P5 & P3 | 1.1 | Same as sub task 3.2. |
| 3.4 | The UK | 6th | 12th | P5 & P2 | 1.0 | Same as sub task 3.2. |
| 3.5 | Netherlands | 6th | 12th | P5 & PI | 1.1 | Same as sub task 3.2. |
| 3.6 | Italy | 6th | 12th | P5 & P1 | 1.1 | Same as sub task 3.2. |

| 3.7 | France | 6th | 12th | P5 & P3 | 1.1 | Same as sub task 3.2. |
|------|--------------------|------|------|--------------|-----|------------------------------------|
| 3.8 | Spain | 6th | 12th | P5 & P2 | 1.0 | Same as sub task 3.2. |
| 3.9 | Portugal | 6th | 12th | P5 & PI | 1.1 | Same as sub task 3.2. |
| 3.10 | Russia | 6th | 12th | P5 & P1 | 1.1 | Same as sub task 3.2. |
| 3.11 | Brazil | 6th | 12th | P5 & P3 | 1.1 | Same as sub task 3.2. |
| 3.12 | Argentina | 6th | 12th | P5 & P2 | 1.1 | Same as sub task 3.2. |
| 4.0 | Promoting MIDI | 12th | 24th | PI, P1, P2, | 9.2 | Two press conferences, one |
| | in media | | | P3, P4 & | | scientific conference, constant |
| | | | | P5 | | paid and unpaid social media |
| | | | | | | promotion of research results. |
| 4.1 | First press | 12th | 12th | PI & P2 in | 1 | Invitation will be sent to both |
| | conference | | | charge of | | domestic and international |
| | | | | this | | media. MIDI research results |
| | | | | activity. | | will be publicized for the first |
| | | | | P1, P3, P4 | | time. |
| | | | | & P5 will | | |
| | | | | participate. | | |
| 4.2 | Scientific | 18th | 18th | PI, P1 & | 1.4 | Research results of the MIDI |
| | conference | | | P2 in | | will be presented to the |
| | | | | charge of | | international scientific |
| | | | | this | | community. We shall meet and |
| | | | | activity. | | establish cooperation with |
| | | | | P3, P4 & | | scientists interested in extending |
| | | | | P5 will | | MIDI research initiative. |
| | | | | participate. | | |
| 4.3 | Final press | 24th | 24 | PI, P2 & | 0.9 | We shall establish Laboratory |
| | conference | | | P3 in | | for Digital Sociometrics within |
| | | | | charge of | | the Institute for Philosophy and |
| | | | | this | | Social Theory in order to |
| | | | | activity. | | continue and extend the MIDI |
| | | | | P1, P4 & | | research. This will be publicized |
| | | | | P5 will | | at the final press conference. |
| | | | | participate. | | |
| 4.4 | Constant | 12th | 24th | PI, P1, P2, | 5.9 | Both paid and unpaid posts – |
| | promotion of the | | | P3 & P4 | | ads will be published to |
| | MIDI initiative in | | | | | disseminate research results to |
| | online media | | | | | the wider public, increase |
| | | | | | | awareness about the issue and |
| | | | | | | educate people on media literacy |

Table 3.3. Milestones.

| Milestone ID ¹ | Milestone name | Task/subtask number | Due month | Means of verification |
|---------------------------|--|------------------------|------------------|--|
| M01 | Web application | 1.0 | 6 th | Media Distortion Index web application is created and it runs online analysis |
| M02 | Website | 2.0 | 12 th | MIDI website is made and it includes live MIDI index from 11 countries and advices for wider public, journalists, legislators and public broadcasting systems. |
| M03 | Scientific papers sent for review | 3.0 | 12th | All scientific papers out coming from the main research results are sent for review to scientific journals and to conferences. |
| M04 | Press conference | 4.0 | 12th | Research results of MIDI are presented to the wider public. |
| M05 | Scientific conference | 4.0 | 18th | Presentation of the research results to the international scientific community together with the Monograph. |
| M06 | Press conference | 4.0 | 24th | Establishment of the Lab for Digital Sociometrics is publicized, together with wrap up of MIDI results for the public. This Lab gives assurance of continuation of our research within the Institute for Philosophy and Social Theory, University of Belgrade. |
| M07 | Paid and unpaid social media promotion of research results | 4.0 | 24th | All promotional activities will be finished by this point |

_

The ID should be composed as M01, M02, etc., and used in the Gantt Chart.

Table 3.4. Major deliverables.

| Deliverable ID ² | Deliverable name | Deliverable description | Task/subtask number | Month of delivery |
|-----------------------------|-------------------|--|------------------------|-------------------|
| D1 | Live graphs | An output of the web application that | 1.0 and 2.0 | 12 th |
| | published | will enable the monitoring of the | | |
| | | index of media distortion. | | |
| D2 | Open data bases | An output of the web application that | 1.0 and 2.0 | 18 th |
| | for scientists | will provide correlations between | | |
| | published | media output and emotional states of | | |
| | | social media users. It will be used for | | |
| | | further analysis and be provided to the | | |
| | | wider scientific community and | | |
| | | updated each month. | | |
| D3 | MIDI Monograph | The book summing up research | 3.0 | 18 th |
| | is published | findings is published and presented | | |
| | | during the conference organized by | | |
| | | our team indented to connect | | |
| | | international scientific community | | |
| | | around significant media impact | | |
| | | issues. | | |
| D4 | MIDI results | Social media profiles of the MIDI | 4.0 | 24 |
| | reach both expert | initiative are followed by significant | | |
| | and international | number of people (more than 100k | | |
| | public | each), MIDI website has been visited | | |
| | | by more than 1 m people, MIDI has | | |
| | | been mentioned in more than 1k | | |
| | | online and offline articles-posts-clips- | | |
| | | news reports. | | |

3.3. Risk management

Table 3.5. Risk management.

| Risk assessment | Description of the risk | Risk management actions to be undertaken by team members or Scientific institutions | (plac | ary rating e a cross i propriate b | n the |
|-----------------|-------------------------|--|-------|--|-------|
| | | | HIGH | MEDIUM | LOW |
| Methodology | Description of the risk | Twitter may discontinue its API. | | | X |
| risk | Actions to be | We have to be ready to gather data other way, even by employing different technology | | | Λ |

² The ID should be composed as D01, D02, etc., and used in the Gantt Chart.

| | undertaken | which is possible. | | |
|---|--|---|---|---|
| Timing, milestones and deliverables | Description of the risk Actions to be undertaken | Production of the MIDI web application is running late. To prevent that we need to be careful to dispose longer period and having the possibility to change the developer. | X | |
| Participants and Scientific | Description of the risk | Some of the participants are beginners in terms of their scientific experience so they may not produce the desired outcome. | X | |
| institutions | Actions to be undertaken | Younger participants will be carefully guided and helped by more experienced scientists. | | |
| | Description of the risk | Late deliveries of server may slow down the project. | | |
| Procurement | Actions to be undertaken | We have to ask for all equipment to be delivered ASAP, even at the beginning of the project despite it may not be necessary at that point. | | X |
| Budgetary issues | Description of the risk | It is challenging to predict exact cost of air travel and other budgetary issues related to conferences. | | X |
| | Actions to be undertaken | Careful preparation and execution of all travel related actions is a nessesity. | | Α |

3.4. Resources to be committed

Table 3.6. Effective person-month requirements.

| ID | Name and family name | Scientific institution | Effective personmonths |
|----|----------------------|---|------------------------|
| ΡI | Ljubisa Bojic | The Institute for Philosophy and Social Theory, University of | 11.4 |
| | | Belgrade | |
| P1 | Srdjan Prodanovic | The Institute for Philosophy and Social Theory, | 9 |
| P2 | Milan Urosevic | The Institute for Philosophy and Social Theory, University of | 9 |
| | | Belgrade | |
| P3 | Balsa Delibasic | The Institute for Philosophy and Social Theory, University of | 9 |
| | | Belgrade | |
| P4 | Jelisaveta Petrovic | Faculty of Philosophy, University of Belgrade | 0.6 |
| P5 | Petar Maric | Faculty of Technical Sciences, University of Novi Sad | 7.6 |
| | | Total effective person-months | 46.6 |

3.4.1 Budget

- Workspace provided by the Scientific institutions include offices with internet access for each of the participants. Conference rooms are also at disposal on request, one at each of the three participating institutions. The Institute for Philosophy and social Theory provides 4 offices for 4 participants from that institution and 1 conference room at disposal. Faculty of Philosophy provides 1 office for 1 participant from that organization and 1 conference room that can be used on request. Faculty of Technical Sciences provides 1 office for 1 participant from that institution together with 1 conference room that can be used when needed. All offices are equipped with appropriate furniture.
- **Equipment provided by the Scientific institutions** includes desktop computers for each of the participants provided by their institutions.
- **Project budget amounts to 164,330.33 EUR**. It includes the following:
 - O Total personnel costs is 90,061.74 EUR for 46.6 months work on the project activities. Principal Investigator work month is valued the highest (1,271.19 EUR Net), other young researchers with the titles of research fellows (1 of them) or assistant professors (2 of them) will get second highest amount for their work month (1,186.44 EUR) while the youngest researchers will get 1,101.69 EUR. This is because crucial contribution of the more experienced researchers especially for writing scientific publications and extra effort they will provide to methodology segment. Most of the activities that are needed are deployed in first part of the project (39 person-months) because both the MIDI web application and scientific publications are intended to be created in that period. Promotional activities such as presentations and education will be conducted in the second part of the project and they require less work effort (7.2 person-months).
 - Travel related expenses (4,379.54 EUR) are planned for all project participants. This is for one conference organized by the MIDI project team. The conference is envisioned as the main event at which MIDI project results will be presented. It would be held in Serbia. Everyone is participating in organization of the conference. Also, each member of the team would present MIDI research findings during the conference. That is why attendance of all MIDI team members would be required.
 - o **Participation in conferences** is important expense used for presentation of our work and networking with colleagues from the same field. That is why 12 international conferences are planned, with two members of the team attending at each one. Total expense for this aspect of the budget is 23,306.00 EUR.
 - Project equipment needed for execution of the MIDI project consists of laptops, tablets, server, TV for presentations, printer etc. Total amount needed for this is 14,761.26 EUR. This equipment is about essential tools needed for work of researchers on the MIDI project. All stationary equipment such as TV, printer and server will be located inside newly formed Laboratory for Digital Psychometrics at the Institute for Philosophy and Social Theory.
 - o **Publications** segment of the budget amounts to 2,966.10 EUR planned for publishing MIDI Monograph which will elaborate on project's research results.
 - o **Services and Subcontracting** are amounting to 6,006.92 EUR. Services are mostly oriented towards promotion of research results. Those segments of the budget include marketing promotion, Printed banners, Printed material for media

- conferences, Catering for 2 media conferences, leasing media center, designing services and preparation for printing. Except these promotion related services, cost for support in coding is included in this part of the budget amounting to only 508.47 EUR, because most of this kind of work will be done by the project participants.
- o **Dissemination**. Organizing one conference, publishing a monograph, advertising research results to the wider public and activity on social media are all significant aspects that will contribute to highest possible visibility of the MIDI project with the cost for Dissemination part of the budget amounting to 7,133.41 EUR
- o **Other** expenses amount to 776.24 EUR. These are for purchasing banner roll-up and paying for team building communication course planned during the conference organized by the MIDI project.
- Expenses of the scientific institutions are also expected because of different requests this project will have towards administrative parts of participating organizations. Total budgeted expense in that regard is 14,939.12 EUR. Most of this amount is allocated to the Institute for Philosophy and Social Theory given the fact this is principal institution for MIDI project from which the most participants come from. This amount is 10,457.38. Other two supporting institutions will get 2,240.87 EUR each.

4. Ethics

Table 3.7. Ethics issues table.

| 1. HUMAN EMBRYOS/FOETUSES | YES/NO | Page |
|---|--------|------|
| Does the proposed research involve human Embryonic Stem Cells (hESCs)? | NO | |
| Does your research involve the use of human embryos? | NO | |
| Does your research involve the use of human fetal tissues / cells? | NO | |
| 2. HUMANS | | |
| Does your research involve human participants? | NO | |
| Does your research involve physical interventions on the study participants? | NO | |
| 3. HUMAN CELLS / TISSUES | | |
| Does your research involve human cells or tissues (other than from Human | NO | |
| Embryos/Fetuses, i.e. section 1)? | | |
| 4. PERSONAL DATA | | |
| Does your research involve personal data collection and/or processing? | NO | |
| Does your research involve further processing of previously collected personal data | YES | 5 |
| (secondary use)? | | |
| 5. ANIMALS | | |
| Does your research involve animals? | NO | |
| 6. ENVIRONMENT & HEALTH and SAFETY | | |
| Does your research involve the use of elements that may cause harm to the | NO | |
| environment, to animals or plants? | | |

| Does your research deal with endangered fauna and/or flora and/or protected areas? | NO |
|---|----|
| Does your research involve the use of elements that may cause harm to humans, | NO |
| including research staff? | |
| 7. DUAL USE | |
| Does your research involve items that are normally used for civilian purposes, but may | NO |
| have military applications or may contribute to the proliferation of weapons of mass | |
| destruction, or involve other items for which an authorization is required? | |
| 8. EXCLUSIVE FOCUS ON CIVIL APPLICATIONS | |
| Could your research raise concerns regarding the exclusive focus on civil applications? | NO |
| 9. MISUSE | |
| Does your research have the potential for misuse of research results? | NO |
| 10. OTHER ETHICS ISSUES | |
| | + |
| Are there any other ethics issues that should be taken into consideration? Please | NO |

5. Other issues

Preferred reviewers: dr Dalibor Petrovic, associate professor at the Faculty of Philosophy, University of Belgrade (<u>dalibor.petrovic@f.bg.ac.rs</u>), dr Petar Vrgovic, associate professor at the Faculty of Technical Sciences, University of Novi Sad (<u>vrgovic@uns.ac.rs</u>) and dr Nebojsa Majstorovic associate professor from the Faculty of Philosophy, University of Novi Sad (<u>majstorovicn@ff.uns.ac.rs</u>).

Non-preferred reviewers: dr Dejan Pralica, associate professor at the Faculty of Philosophy, University of Novi Sad (pralica@ff.uns.ac.rs) and prof. dr Milos Milenkovic, professor at the Faculty of Philosophy, University of Belgrade (milmil@f.bg.ac.rs).

B. Attachments

The following files are attached (names are self-explanatory):

- Budget_MIDI.xls,
- Gantt_Chart_MIDI.xls,
- Presentation_MIDI.pdf,
- Declarations_MIDI.pdf,
- Biography_MIDI_P1.pdf, Bibliography_MIDI_P1.pdf
- Biography_MIDI_P2.pdf, Bibliography_MIDI_P2.pdf
- Biography_MIDI_P3.pdf, Bibliography_MIDI_P3.pdf
- Biography_MIDI_P4.pdf, Bibliography_MIDI_P4.pdf
- Biography MIDI P5.pdf, Bibliography MIDI P5.pdf
- Additional_Documentation_MIDI.pdf