Models Applied to Crime Analysis

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Module one: *Inferential analysis of crime* (Prof. Alberto Aziani)

***COURSE AIMS AND INTENDED LEARNING OUTCOMES***

The course aims to examine the determining factors of certain complex criminal phenomena and to provide students with the necessary tools for creating and interpreting empirical-quantitative analysis in the field of criminology. At the end of the course, students 1) will have acquired knowledge of factors causing different types of crime 2) will have learned to produce analysis and/or to critically analyse literature (data, methods, limits), 3) will be capable of formulating research questions and hypotheses regarding criminal issues. There will be a workshop approach and students will be required to participate in class discussions and practical exercises.

***COURSE CONTENT***

1. Introduction to the module and assessment.

2. Identifying the determinants of different types of crime.

4. Analysis of methodology used in literature to study a given phenomenon on the basis of the starting hypothesis and the data available.

5. Identifying the strengths and weaknesses of a scientific paper by analysing the problems of research, methodology and data [How were the hypotheses tested in literature? What factors were examined?].

7. Developing one’s own paper [How can I test my hypothesis? How can I answer my own research question based on the data available?].

***READING LIST***

The reading list consists of essays in English and is updated year by year. The updated reading list will be provided at the start of the course and posted on *Blackboard* and will vary according to the modality of the examination chosen (*see ASSESSMENT METHOD AND CRITERIA*). The reading list for the academic year 2022-2023 is given below for information only:

*Students sitting the examination according to Modality 1:*

• Course notes and slides.

*Students sitting the examination according to Modality 2:*

Homicides and violent crimes

• Trent C. L.S. and Pridemore A.W. (2012) “A Review of the Cross-National Empirical Literature on Social Structure and Homicide”, in Liem M.C.A. and Pridemore W.A. (eds.), Handbook of European Homicide Research: Patterns, Explanations, and Country Studies, Springer.

• Pratt, Travis C., and Timothy W. Godsey (2003). ‘Social Support, Inequality, and Homicide: A Cross-National Test of an Integrated Theoretical Model’. Criminology 41 (3): 611–44

• Dugato M., Calderoni F., and Berlusconi G. (2017). ‘Forecasting Organized Crime Homicides: Risk Terrain Modeling of Camorra Violence in Naples, Italy”. Journal of Interpersonal Violence, DOI: 10.1177/0886260517712275.

• Braga A., Turchan B., and Barao L. (2019) “The Influence of Investigative Resources on Homicide Clearances.” Journal of Quantitative Criminology 35 (2): 337–64.

• Pyrooz D. C. and Decker S. H. (2013) “Delinquent Behavior, Violence, and Gang Involvement in China.” Journal of Quantitative Criminology 29 (2): 251–72.

Mafias and organized crimes

• Moro et al. (2014) “The Politics of Mafia Violence: Explaining Variation in Mafia Killings in Southern Italy (1983-2008)” Terrorism and Political Violence, 1-24

• Pinotti, Paolo (2015) “The causes and consequences of organised crime: preliminary evidence across countries”. The Economic Journal, 125 (586): 158-174

Urban and property crimes

• Andresen, Martin A. and Hodgkinson, T. (2018) “Predicting Property Crime Risk an Application of Risk Terrain Modeling in Vancouver, Canada” European Journal on Criminal Policy and Research, 24:373–392

Drug trafficking

*•* Aziani A., Berlusconi G., and Giommoni L. (2021) “A Quantitative Application of Enterprise and Social Embeddedness Theories to the Transnational Trafficking of Cocaine in Europe.” Deviant Behavior 42 (2): 245–67

Terrorism

• Benmelech, Efraim, and Esteban Klor (2016). “What Explains the Flow of Foreign Fighters to ISIS?” (No. w22190). National Bureau of Economic Research.

• Caruso, Raul and Friedrich Schneider (2011) “The socio-economic determinants of terrorism and political violence in Western Europe” European Journal of Political Economy, 27(1): S37-S49

• Piazza, James A. (2006). “Rooted in Poverty?: Terrorism, Poor Economic Development, and Social Cleavages.” Terrorism and Political Violence, 18 (1):159–77.

Sexual and domestic violence

*•* Espelage, D. L., Basile, K. C., De La Rue, L., & Hamburger, M. E. (2015). “Longitudinal Associations Among Bullying, Homophobic Teasing, and Sexual Violence Perpetration Among Middle School Students”. Journal of Interpersonal Violence, 30(14), 2541–2561.

• Macmillan, Ross and Gartner Rosemary (1999) “When She Brings Home the Bacon: Labor Force Participation and the Risk of Spousal Violence Against Women”, Journal of Marriage and Family, 61 (4): 947-958.

• Stotzer, Rebecca L., and MacCartney, Danielle (2016). “The Role of Institutional Factors on On-Campus Reported Rape Prevalence”, Journal of Interpersonal Violence, 31(16), 2687–2707.

***TEACHING METHOD***

Frontal lectures, workshops, class discussions and exercises. The course will be held in English.

***ASSESSMENT METHOD AND CRITERIA***

Students can choose between two examination modes:

*Modality 1*

Written paper (in English or Italian). The examination consists of a written paper of 18,000 characters (all inclusive). The short paper should present the application of a quantitative empirical method for the analysis of criminal phenomena. The written paper carries 31 marks (maximum 30 marks for papers written in Italian). Marks over 30 are equivalent to 30 with honours. If students obtain a pass mark they may not resit the examination.

In the event of the paper being unsatisfactory and the candidate would like to submit another paper during the following session, then they may submit the same topic at no more than two examination sessions.

The final mark for the course is determined by calculating the mathematical average of the marks for the two modules, providing that 18 or above was obtained for each. 30 marks wih honours corresponds to 31 marks. The average is rounded up to the nearest whole number. If students obtain a pass mark they may not resit the examination.

The assessment criteria will be the correctness and appropriateness of the language, the completeness of references to the reading material, the correct use of sources and data, reasoned and consistent structuring, the ability to replicate the typical structure of a scientific paper, the ability to identify and comment on a gap in knowledge, the ability to conduct quantitative empirical analysis and the ability to discuss the research results.

*Modality 2:*

Oral test (in English): the examination consists of an oral test in English on material which will be indicated in the syllabus (5 open-ended questions – maximum 31 marks). 3 of the questions will be notional and 2 questions will require a critical approach to the discussion of questions regarding the research, hypothesis, method, results and limits of the studies indicated in the reading list. If students obtain a pass mark they may not resit the examination.

The assessment criteria will be: correctness of the content, logical organisation of the answers, conceptual and presentation clarity, ability to summarise, appropriate use of specific terminology and a critical approach.

***NOTES AND PREREQUISITES***

Attendance is strongly recommended given the applied and workshop nature of the course. Each year the reading list is updated in line with developments in the subject and to keep abreast of students’ interests.

The updated syllabus, reading list, instructions and other documents will be posted on the course Blackboard page. Blackboard will also contain information regarding timetable changes, examination information and more.

All students (attending and non-attending, current and former) are invited to register on the course on Blackboard and visit it regularly.

To benefit most from attending the course, students should have basic knowledge of quantitative empirical research (acquired on the Methodologies for Policy Assessment course), of criminal research methodology (acquired on the Methods and Techniques of Criminal Research and Applied Criminology) and of writing techniques (acquired on the Workshop for source research and writing papers and theses, and on the Applied Criminology course). Students should also have basic computer and spreadsheet skills (e.g. Microsoft Excel). This knowledge is acquired during the first year, and in particular in Methodologies for the evaluation of policies and techniques for decisions and the connected workshops.

In case the current Covid-19 health emergency does not allow frontal teaching, remote teaching and assessment will be carried out following procedures that will be promptly notified to students.

Further information can be found on the lecturer's webpage at http://docenti.unicatt.it/web/searchByName.do?language=ENG or on the Faculty notice board.

Module 2: *Analysis of criminal networks* (Prof. Francesco Calderoni)

***COURSE AIMS AND INTENDED LEARNING OUTCOMES***

The course introduces students to the application of social networks in analysing criminality from a theoretical and operational perspective. At the end of the course, students will have acquired basic knowledge of analysing social networks, the main network-based approaches to studying criminality and the skills required for independently analysing and interpreting data and results.

***COURSE CONTENT***

1. Introduction to the module and assessment method.

2. Basic concepts of social network analysis.

3. Basic strategies for analysing networks.

4. The analysis of criminal networks.

5. Practical workshop exercises on collecting, analysing and interpreting data and results using UCINET 6.

***READING LIST***

The reading list is composed of essays and book chapters in English and is updated every year in order to guarantee excellent learning outcomes. The updated reading list will be provided at the beginning of the course on Blackboard. For information only, see below the reading list for the academic year 2022-2023:

Bright, David A., Catherine Greenhill, Michael Reynolds, Alison Ritter, and Carlo Morselli. 2015. “The Use of Actor-Level Attributes and Centrality Measures to Identify Key Actors: A Case Study of an Australian Drug Trafficking Network.” Journal of Contemporary Criminal Justice 31(3):262–78.

Calderoni, Francesco, and Elisa Superchi. 2019. ‘The Nature of Organized Crime Leadership: Criminal Leaders in Meeting and Wiretap Networks’. Crime, Law and Social Change 72 (4): 419–44. https://doi.org/10.1007/s10611-019-09829-6.

Calderoni, Francesco. 2012. “The Structure of Drug Trafficking Mafias: The ‘Ndrangheta and Cocaine.” Crime, Law and Social Change 58(3):321–49.

Calderoni, Francesco. 2014a. ‘Social Network Analysis of Organized Criminal Groups’. In Encyclopedia of Criminology and Criminal Justice, edited by Gerben Bruinsma and David Weisburd, 4972–81. New York: Springer.

Calderoni, Francesco. 2014b. ‘Strategic Positioning in Mafia Networks’. In Crime and Networks, edited by Carlo Morselli, 163–81. Criminology and Justice Studies. New York: Routledge.

Calderoni, Francesco. 2014c. “Identifying Mafia Bosses from Meeting Attendance.” Pp. 27–48 in Networks and Network Analysis for Defence and Security, edited by A. J. Masys. Cham: Springer International Publishing Switzerland.

Calderoni, Francesco. 2015. ‘Predicting Organized Crime Leaders’. In Disrupting Criminal Networks: Network Analysis in Crime Prevention, edited by Gisela Bichler and Aili E. Malm, 89–110. Crime Prevention Studies 28. Boulder: Lynne Rienner Publishers.

Calderoni, Francesco. 2018. Le reti delle mafie. Le relazioni sociali e la complessità delle organizzazioni criminali. Milano: Vita e Pensiero. Capitoli I, IV and V

Gravel, Jason, and George E. Tita. 2017. “Network Perspectives on Crime.” Oxford Research Encyclopedia of Criminology. Oxford: Oxford University Press. http://criminology.oxfordre.com/view/10.1093/acrefore/9780190264079.001.0001/acrefore-9780190264079-e-251.

Krebs, Valdis E. 2002. “Mapping Networks of Terrorist Cells.” Connections 24(3):43–52.

Morselli, Carlo, Cynthia Giguère, and Katia Petit. 2007. “The Efficiency/Security Trade-off in Criminal Networks.” Social Networks 29 (1): 143–53.

Morselli, Carlo. 2009. “Hells Angels in Springtime.” Trends in Organized Crime 12(2):145–58

***TEACHING METHOD***

Frontal lectures with the discussion of papers and case studies. In the workshop, students will learn to use the dedicated software (UCINET 6).

Except for the introductory lecture, the course will be delivered in English.

***ASSESSMENT METHOD AND CRITERIA***

Students will be assessed by means of a written exam in the IT lab using the Blackboard platform. It will be divided into two parts:

1. One open-ended question, for which 20 minutes are allocated. The question will be marked from 0-10.

2. Exercises on network analysis, for which 90 minutes are allocated. The exercises are worth a maximum of 22 marks.

The final mark is the total of those awarded for both parts. Marks above 30 correspond to a final mark of 30 with distinction (*lode*).

Students may not retake the exam for the module if they have already achieved a pass mark.

The final mark will result from the arithmetic average of the results of the two modules, provided that both of them are positive (18/30 or higher). The mark 30 cum laude (with honours) corresponds to 31 points. The average will be rounded up to the nearest whole number.

***NOTES AND PREREQUISITES***

In case the current Covid-19 health emergency does not allow frontal teaching, remote teaching and assessment will be carried out following procedures that will be promptly notified to students.

In view of the applied nature of the course (use of network analysis software) and the continually changing topics, attendance is strongly encouraged. The reading list is updated every year to keep abreast of developments and innovations in the analysis of criminal networks.

For that reason, students having not passed the exam within the eight exam session scheduled (from June to February of the next year of that one of attendance), will be assessed on the course content and methods regarding the next a.y.

Updated syllabus, reading list, instruction and other documents will be published on the course Blackboard page. Blackboard will also be used to communicate timetable changes, exam information and more.

All students – including non-attending and supplementary-year students - should register on the course Blackboard page and visit it regularly.

To benefit most from attending the course, students require basic knowledge of criminological research methods as well as theories and empirical research methods associated with studying organised crime (acquired in the first year of the Methods and Techniques for Criminological Research and Applied Criminology course). Basic knowledge of computer use and analysis with spreadsheets (eg Microsoft Excel) is also required. This knowledge is acquired in the first year and in particular in the courses of Methodologies for the evaluation of policies and techniques for decisions with the connected workshops.

Students are recommended to have a computer with Windows operating system, as network analysis software is difficult to use on other operating systems

Further information can be found on the lecturer's webpage at http://docenti.unicatt.it/web/searchByName.do?language=ENG or on the Faculty notice board.