

## 1st Joint CCR-PCRC Workshop

# Institutional Design and Conflict Resolution

Workshop Venue: Elsa-Brändström-Haus, Kösterbergstraße 62, 22587 Hamburg

## Programme

FRIDAY 09 JANUARY 2009

- 13:30 – 14:00      Registration and Coffee
- 14:00 – 14:10      *Welcome*  
Frank Steffen (University of Liverpool)
- Afternoon Session **Chair:** Manfred Holler (University of Hamburg)
- 14:10 – 14:55      *Lawmakers as Norm Entrepreneurs*  
Georg von Wangenheim (University of Kassel)  
*Discussant:* Martin Leroch (University of Hamburg)
- 15:00 – 15:45      *Incremental Innovation and Patent Protection for Pharmaceutical Products in India: A Law and Economics Analysis of the Novartis Case*  
Thomas Eger (University of Hamburg)  
Petra Ebermann (University of Hamburg)  
*Discussant:* David Hojman (University of Liverpool)
- 15:45 – 16:15      Coffee Break
- 16:15 – 17:00      *Distribution of Voting Weights and Inequality in Power*  
Mika Widgrén (Turku School of Economics)
- 17:05 – 17:50      *Measuring Power and Satisfaction in Societies with Opinion Leaders*  
Frank Steffen (University of Liverpool)
- 18:00                Dinner

Organizers:    Frank Steffen      University of Liverpool    e-mail: steffen2@liv.ac.uk  
                  Manfred Holler    University of Hamburg    e-mail: holler@econ.uni-hamburg.de

SATURDAY 10 JANUARY 2009

Morning Session **Chair:** Hartmut Kliemt (Frankfurt School of Finance and Management)

09:30 – 10:15 *Learning to be Fair*  
Luciano Andreozzi (University of Trento)  
*Discussant:* Jens Tiedemann (University of Hamburg)

10:20 – 11:05 *What Explains the Success and Failure of Collective Property?*  
Hannu Autto (University of Turku)

11:05 – 11:30 Coffee Break

11:30 – 12:15 *Are Spatial Models Trustworthy Tools in Consensus Reaching?*  
Hannu Nurmi (University of Turku)  
*Discussant:* Wenke Wegner (University of Hamburg)

12:15 – 13:20 Lunch

Afternoon Session **Chair:** Marlies Ahlert (Martin Luther University Halle-Wittenberg)

13:20 – 14:05 *Observations on Crowding Games*  
Paula Mäkelä (University of Turku)

14:10 – 14:50 *Communication, Sympathy, and Collective Decisions*  
Andreas Nohn (University of Turku & University of Hamburg)

14:50 – 15:05 Coffee Break

15:05 – 19:15 Excursion

19:15 Dinner

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## Abstracts

FRIDAY 09 JANUARY 2009

### Afternoon Session

**Title:** Lawmakers as Norm Entrepreneurs

**Authors:** Emanuela Carbonara, Francesco Parisi, and Georg von Wangenheim

**Abstract:** In this paper we consider the role of lawmakers as norm entrepreneurs. Drawing from expressive law theories and social response theories we shed light on the role of law in shaping social values and norms, and to the ability or inability of the law to produce social norms where they did not exist before. We also show that inducing substantial changes in behavior by new laws may require legislation in a piecemeal way.

**Title:** Incremental Innovation and Patent Protection for Pharmaceutical Products in India: A Law and Economics Analysis of the Novartis Case

**Authors:** Thomas Eger, Petra Ebermann, and Padmanabha Ramanujam

**Abstract:** In 2005, patent protection in India underwent a dramatic change. Whereas the Patent Act of 1970 excluded product patents for food, medicinal drugs and the products of chemical processes from patentability, the 2005 Patents (Amendment) Act allows for product patents also in the pharmaceutical sector, with one important qualification: According to Section 3(d), new forms of existing pharmaceutical substances that do not result in significantly enhanced "efficacy" or employ at least one new reactant are not patentable. This Act constitutes India's last step towards complete compliance with the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement). There is some evidence that India is moving away from a mere producer of generics to an innovator developing new drugs and also improving existing drugs in order to make them more suitable for the specific conditions in less developed countries (Chaudhuri 2007, 2004; Thomas 2006). This paper presents a study which intends to capture the widely discussed Indian patent policy for the pharmaceutical sector. In the following, we describe the legal framework of patent protection in India which is to some extent determined by the TRIPS Agreement and other international agreements (chapter I). Thereafter, we present the problem of incremental innovation with reference to the recent and controversially discussed Novartis case which centres on Section 3(d) of the 2005 Patents (Amendment) Act (chapter II) and analyse it from a law and economics perspective (chapter III).

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**Title:** Distribution of Voting Weights and Inequality in Power

**Authors:** Serguei Kaniovski and Mika Widgrén

**Abstract:** In many voting bodies, it is desirable for the distribution of voting power to follow the distribution of voting weights as closely as possible. This is true when the voting weight depends on the voter's contribution to a common pool of resources. Examples include the Bretton-Woods institutions in which the voting weights in the Board of Governors equal the member's share in the institution's authorized ordinary capital, the share holding in corporations and also legislative bodies like the EU Council. It is well known that the distribution of voting power differs from the distribution of voting weights. This basic fact is often used to illustrate the necessity for specialized indices of voting power such as the classical Penrose/Banzhaf and Shapley-Shubik measures. Power measures are functions of voters' voting weights and the voting rule. In this paper, we investigate the extent to which the power indices distort the inequality in voting weights. This depends on several factors: the number of voters, the voting rule and, most importantly, on the shape of the weight distribution. We compute the difference in the inequality of the weight and power distribution for a variety of simple discrete distributions that represent the basic elements of the shape: symmetry and skew, uni-modality and bi-modality, etc. The inequality is measured using the Gini coefficient. We find that the calculus of power introduces a left skew to the distribution. This is because voting power is a non-decreasing step function of the voting weight. The magnitude of distortion depends on the support of the weight distribution. Specifically, the distortion is highest when the number of voters is small and the admissible voting weights are small. We also find that bimodal weight distributions, i.e. distributions in which very low and very high weights are common but moderate weights are rare, change most under the power transformation.

**Title:** Measuring Power and Satisfaction in Societies with Opinion Leaders

**Authors:** René van den Brink, Agnieszka Rusinowska, and Frank Steffen

**Abstract:** We study a two-action model in which the members of a society, called actors, are to choose one action, for instance, to vote 'yes' or 'no' on a specific proposal. Each of the actors has an inclination to choose one of the actions (to choose either 'yes' or 'no'). There might exist actors called opinion leaders, who have some power over the other actors called followers, and they exercise this power by influencing their behavior, i.e. their choice of action. After all actors have chosen their actions, a decision-making mechanism determines the collective choice resulting out of the individual choices. The structure of the relations between the actors in such a society can be represented by a bipartite digraph. We study such digraphs in which each actor is exclusively either an opinion leader, follower, or independent actor. We analyze the satisfaction and power distribution within the society of actors with and without the opinion leaders. While the satisfaction of an actor is defined by the number of times its inclination coincides with the collective choice, its power is measured by the number of times the actor has a swing, i.e. when the change of its inclination, given the inclinations of the others, results also in a change of the collective choice. We study common properties of the satisfaction and power measures. The only property studied in this paper which is different for both measures is normalization.

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**SATURDAY 10 JANUARY 2009**

**MORNING SESSION**

**Title:** Learning to be Fair

**Author:** Luciano Andreozzi

**Abstract:** We study the process of equilibrium selection in games when players have 'sophisticated' preferences of the type discussed, among others, by Rabin (1993) and Segal and Sobel (2007). To this end, we employ standard noisy version of the best response dynamics. We obtain several results concerning some popular games such as the Prisoner's Dilemma, the Battle of the Sexes and the Dictator Game. We also consider sequential games such as the Ultimatum Game.

**Title:** What Explains the Success and Failure of Collective Property?

**Author:** Hannu Autto

**Abstract:** Studies of common-pool resources (CPRs) have cumulated knowledge of variables that facilitate successful resource management. However, little is known about the relationship between these variables. This paper aims to provide theoretical tools to address the problem of complex causality in CPR-studies. We claim that any collective property regime is based on either norms or monitoring or some combination of these. It is then argued that any norm effect makes it necessary to consider collegial monitoring. We build a game theoretical model of collective property in CPRs using a grammar of institutions provided by Sue Crawford and Elinor Ostrom. Finally, using our analysis we take first steps towards case classification and give examples of relationships between empirical variables.

**Title:** Are Spatial Models Trustworthy Tools in Consensus Reaching?

**Author:** Hannu Nurmi

**Abstract:** This note discusses Ostrogorski's, Simpson's and related paradoxes and their implications to spatial models of choice. We argue that the assumption that individual preferences have a spatial representation is a significant restriction on the applicability of the certain types of spatial models.

**AFTERNOON SESSION**

**Title:** Observations on Crowding Games

**Author:** Paula Mäkelä

**Abstract:** Crowding games with non-anonymous players are analyzed. The properties and characteristics of non-anonymous crowding games are presented and compared to those of an anonymous game. Conditions under which a three-player three-alternative non-anonymous crowding game possesses a cycle will be given. However, three-player three-alternative games are emphasized only for reasons of exposition and most observations extend to the games with any finite number of players or alternatives.

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**Title:** Communication, Sympathy, and Collective Decisions

**Author:** Andreas Nohn

**Abstract:** We model juries with a process of communication in the spirit of Young (1998). That is, the jury starts with a random profile of initial attitudes (vote 'yes' or 'no'). In each round, one random member updates his attitude according to his initial and current attitude as well as all other players' current attitudes. All three dimensions of influence (past, present, society) may be weighted in an arbitrary way, possibly different for each member. In addition, we take into account the players' rationality: the probability to choose a particular attitude decreases exponentially in the weighted sum of deviations, taken over all dimensions and multiplied by the players' rationality. The overall process of attitudes thus becomes an ergodic Markov chain for any given profile of initial attitudes such that the jury's long-run behavior can be approximated by the corresponding stationary distributions. As rationality of players approaches infinity, only profiles minimizing the overall sum of deviations, taken over all players and dimensions of influence, emerge in the long run. As an application, we present an extension of Condorcet's jury theorem. Based on the assumption that initial attitudes are independent and identically distributed with probability  $p > 0.5$  to choose the truth, and that the social network of jurors is both fully connected and perfectly symmetric, we find the following statements for infinitely rational jurors. In any jury with or without communication and a supermajority rule with quota  $q < p$ , the probability of casting the right decision approaches 1 as the size of the jury approaches infinity. In a jury without communication and a supermajority rule with quota  $q > p$ , this probability approaches 0. In a jury with communication and a supermajority rule with quota  $q > p$ , this probability approaches 1 (0) if  $p$  exceeds (falls below) some critical value varying positively with the jurors' valuation of the past and negatively with their valuation of the society.

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