

# EARLY CHRISTIANS IN THE MACHINE:

## How does emerge a belief in supernatural efficacy of a ritual?

Religion Explained? The Cognitive Science of Religion after Twenty-five Years (5th biennial IACSR meeting and General Assembly 20-22 June 2014, Brno, Czech Republic)

### RESEARCH TOPICS AND QUESTIONS

#### INTRODUCTION

The late ancient Mediterranean world can be characterized as a situation of “religious market”, where available religious alternatives with their cognitive and social appeal competed each other, including different versions of early Christian representations and practices. Due to the considerable modern scholarship’s effort to map the extant sources from this period, this environment offers a perfect opportunity to test general hypotheses concerning long-term cultural processes. Behind the development of early Christian meal practices lies the institution of Greco-Roman banquet (Klinghardt, 1996; Smith, 2003), which was here gradually modified into the Eucharistic ritual (Bradshaw, 2004). This ritual covers a belief in supernatural efficacy of consumed meal elements, which is also quite often subject of cognitive theorizing (cf. McCauley & Lawson, 2002: 34, 118, 120, 133; Sørensen, 2007a: 285, 292; Sørensen, 2007b: 99, 104). This project aims to identify crucial steps leading to formation and success of beliefs of this type both in the given historical process and in general. It uses a set of agent-based simulations (1) to test hypotheses regarding cultural dynamics of rituals, (2) to make own theoretical assumptions explicit, and (3) to guide intuition before detailed analysis of the sources.

**KEYWORDS:** Cultural Dynamics (cultural innovation, selection, modification and transmission); Cognitive Historiography; Predictive Historiography; Agent-Based Social Cognitive Simulations; Cognitive Processing of Ritual; Ritual Efficacy; Ritual and Early Christianity; Ritual Meal Practices, Eucharistic Origins

#### QUESTIONS:

- Which cognitive mechanisms do constitute cognitive attraction of a ritual underlying a belief in its supernatural efficacy?
- How important are these mechanisms (and the cognitive attraction based on their activation, if at all) in processes of cultural transmission, selection and modification of a ritual practice in comparison to the non-content-dependent cognitive factors?

### MATERIALS AND METHODS

#### DATA:

- Early Christian literary sources coded according to variables related to the hypotheses
- Dynamics of artificial societies

#### METHODS:

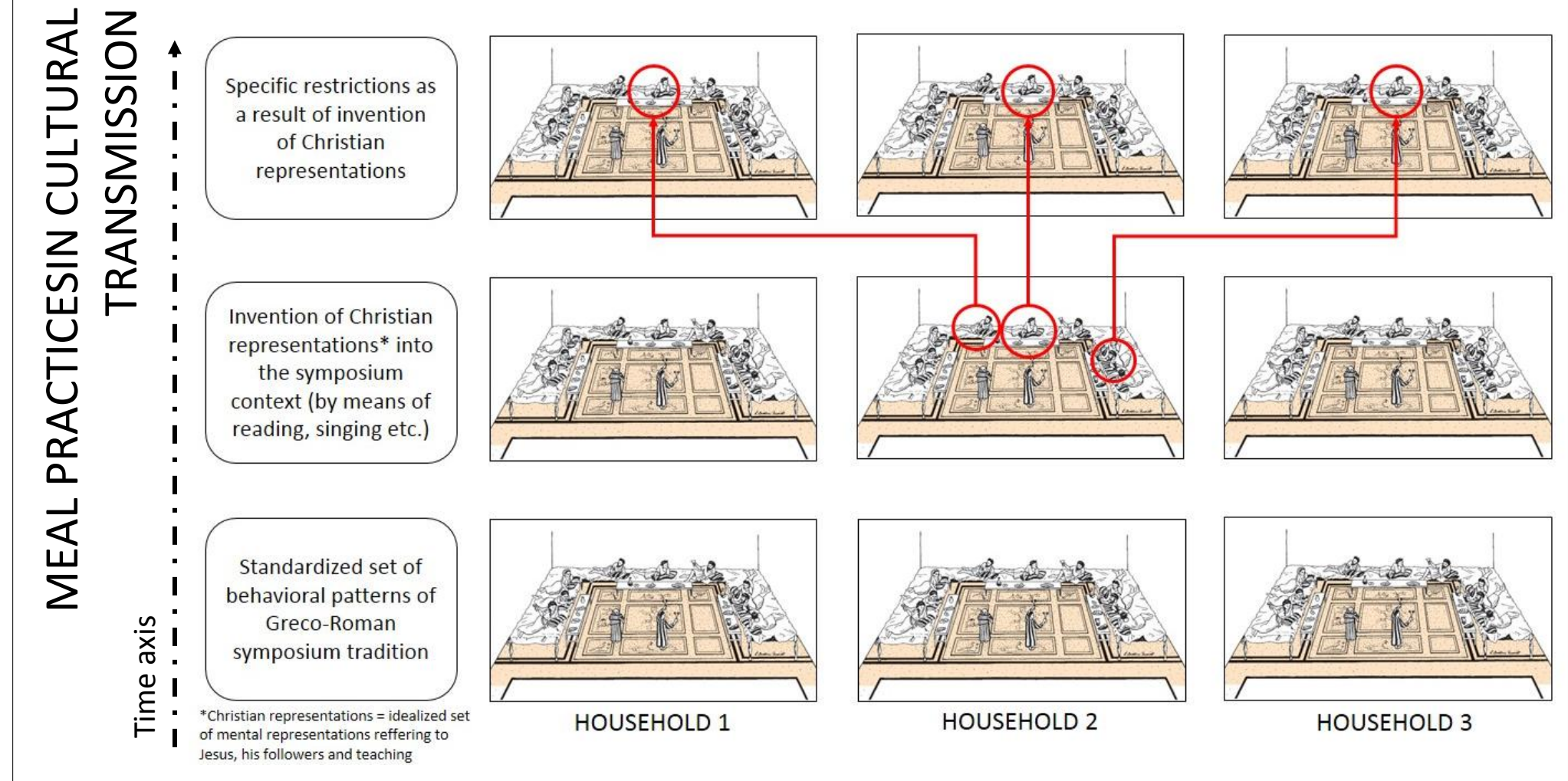
- Preliminary analysis of the sources (data coding)**
- A set of agent based simulations – sensitivity analysis** (see <http://blogs.helsinki.fi/vojkas/my-project-materials/simulation-1-description/>)
  - Agents with specific features of cognition (*tedium effect* or *over-ritualization*) (cf. Sun, 2006)
  - Socio-historically faithful design (exchange of information among banqueting Greco-Roman voluntary associations) (Smith, 2003; Taussig & Smith, 2012)
  - Specific modes of an innovation’s adoption (decision of presiding persons, exchanged books, wandering charismatics etc.)
- Detailed analysis of the sources in comparative framework**

### HYPOTHESES

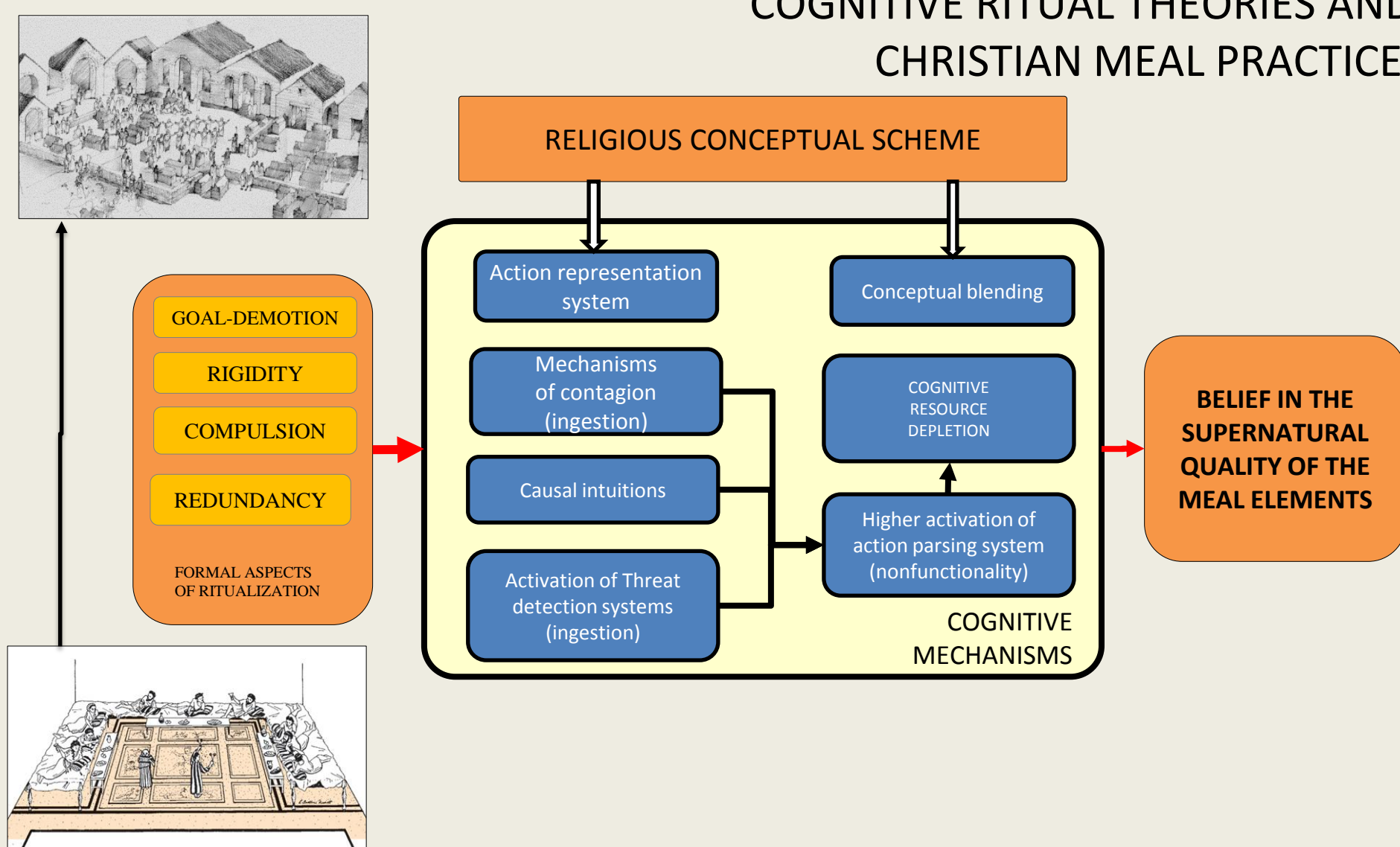
**H0 – Social learning biases’ hypothesis:** *The belief in a ritual efficacy of a collective ritual can be cultural successful due to the authority of person, text or community who invented it, regardless its content-dependent cognitive features* (cf. Henrich & Boyd, 2002).

**H1 – Ritual form hypothesis:** *The belief in a ritual efficacy of a collective ritual can be cultural successful by the invention of a supernatural agent into the action representation structure of given action in a way fitting the position of a cognitive attractor* (Barrett & Lawson, 2001; McCauley & Lawson, 2002)

**H2 – Ritualized behavior’s formal aspects hypothesis:** *The belief in a ritual efficacy of a collective ritual can be cultural successful by involving formal aspects of given action activating the mechanisms of ritualization and causal intuitions* (Boyer & Liénard, 2006; Legare & Souza, 2012).



### COGNITIVE RITUAL THEORIES AND CHRISTIAN MEAL PRACTICES



### PREDICTIONS

**P0 – Prediction of the social learning biases’ hypothesis:** The belief in the special quality of the meal elements was cultural successful due to the authority of the person, text or community who invented it, regardless its content-dependent cognitive features.

**P1 – Prediction of the ritual form hypothesis:** The belief in the special quality of the meal elements was cultural successful in terms of the epidemiology of cognitive attractive representation of given action and its effect by means of activation of the action representation system (During a prayer, the bread gained the permanent special quality due to the special quality of the person saying the prayer etc.)

**P2 – Prediction of the ritualized behavior’s formal aspects hypothesis:** The belief in the special quality of the meal elements was cultural successful in terms of the epidemiology of cognitive attractive representation of given action and its effect by means of activation of the mechanisms of ritualization (thread detection system and action parsing system) and causal intuitions.

### VARIABLES

Source's specification information				Dependent variables													Independent variable
				ACTION REPRESENTATION		NON-FUNCTIONALITY (thread detection, higher action parsing, causal intuitions)							CONCEPTUAL BLENDING				
				Restrictions of presiding	Restrictions of participation	Substantial meal context (deipnon)	Nutritional meal	Special time (morning gatherings)	Meal (deipnon) followed by symposium	CONTAGION	Special room	Fixed prayer	Supper's discourse	Fixed prayer + Last Supper's discourse	Conceptualization of bread (+wine) in terms of Jesus' agency	Last Supper's discourse	
Author/community	Source	Datation	Location														
Paul of Tarsus	1 Cor 10:16; 11:17-34	56	Ephesus/Corinth	0-CS	0-CS	1	1	0	1	1	0	0	0	1	1	1-TDI	
Johannine Literature	esp. J 6	90-100		NK	NK	1-CS	1	0	1	0-CS	0	0	0	1	0	1	
Ignatius of Antioch	Smyr. 7.1; Eph. 20; Magn. 7.2; Phil. 4; Trall. 7.2	95-117		1	NK	1-CDI	1	0	1	0-CS	0	0	0	1	1	1	
Didache	Did. 9-10	90-150	Antioch	0-CS	1	1	1	0	1	1-CS	1	0	0	0	0	1	
Justin Martyr		155-157		1	1	0-TDI	1	1-TDI	NK	0-TDI	0	0	0	1	1	1	
Irenaeus of Lyon		180		...	...	...	...	...	...	...	...	...	...	...	...	...	
Clement of Alexandria		150-215		...	...	...	...	...	...	...	...	...	...	...	...	...	
Origen		184-253		...	...	...	...	...	...	...	...	...	...	...	...	...	
Tertullian		160-225		1	1	0	0	1	0	1	0	0	0	1	1	1	
Cyprian		200-258		1	1	0	0	1	0	1	0	0	0	1	1	1	
Apostolic Tradition		375-400		1	1	1	1	1	NK	0	NK	1	1	1	1	1	

1	present (direct reference or derived from context)
0	absent (direct reference or derived from context)
1-CS	present (consensus of scholarship)
0-CS	absent (consensus of scholarship)
1-CDI	present (context dependent interpretation)
0-CDI	absent (context dependent interpretation)
1-MS	present (majority of scholarship)
0-MS	absent (majority of scholarship)
1-TDI	present (theory dependent interpretation)
0-TDI	absent (theory dependent interpretation)
NK	not known
...	not coded yet

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### ILLUSTRATIVE PASSAGES FROM THE SOURCES

- “...being under the guidance of the Comforter, in obedience to the bishop and the presbytery with an undivided mind, breaking one and the same bread, which is the medicine of immortality, and the antidote which prevents us from dying, but a cleansing remedy driving away evil, [which causes] that we should live in God through Jesus Christ” (Ignatius of Antioch, *Eph.* 20).
- “And let none eat or drink of your Eucharist but such as have been baptized into the name of the Lord, for of a truth the Lord hath said concerning this, Give not that which is holy unto dogs” (*Didache* 9:5).
- “The faithful shall be careful to partake of the eucharist before eating anything else. For if they eat with faith, even though some deadly poison is given to them, after this it will not be able to harm them. (...) All shall be careful so that no unbeliever tastes of the eucharist, nor a mouse or other animal, nor that any of it falls and is lost. For it is the Body of Christ, to be eaten by those who believe, and not to be scorned.” (*Apostolic Tradition* 36-37)

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**Ritualization of Early Christian Meal Practices (doctoral thesis project, 2014/1 – 2017/8)**

SUPPLEMENTAL MATERIALS: [blogs.helsinki.fi/vojkas/](http://blogs.helsinki.fi/vojkas/)

- University of Helsinki - REECR: A Nordic project on Ritual and the Emergence of Early Christian Religion: A Socio-Cognitive Analysis ([blogs.helsinki.fi/ritual-earlychristianity/](http://blogs.helsinki.fi/ritual-earlychristianity/))

- Masaryk University: Department for the Study of Religions

