

## Measuring Organizational Closure in the MPI/GQT/CMM Context<sup>1</sup>

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**Abstract:** Organizational closure (OC) is a theoretical state within Walter von Lucadou's Correlation Matrix Method (CMM) for producing evidence of mind/matter interactions or *psi*. In practical terms, OC is affected by attentional, emotional/ affective, contextual, and motivational elements in the experimental system. Because maximal OC is considered desirable in obtaining non-local entanglement correlations, a user-friendly measurement of OC in the CMM experiments would be useful. Based on studies that have found a positive association between the participants' under-estimation of session duration and *psi* task performance, the method suggested here involves the participants' retrospective estimate of duration. This research note concludes with advice on how this measure may be implemented.

**Keywords:** Correlation Matrix Method, Organizational Closure, time contraction

*Organizational closure* (OC) has been a consistent element of Walter von Lucadou's Model of Pragmatic Information (MPI) for many years (Lucadou, 1996). More recently, with Harald Walach, Hartmann Römer, and others, he has discussed the relevance of this term within a Generalized Quantum Theory (GQT) interpretation of mind-matter or psychokinesis experiments (Lucadou, Römer, & Walach, 2007) and its relevance to the Correlation Matrix Method (CMM: Lucadou, 2015; Flores, Tierney, & Watt, 2018). In this method, maximal OC is considered necessary, in addition to complementary measurements or observations, to produce the conditions that allow the occurrence of non-local entanglement correlations. These occur within the matrices derived from psychological and physical variables in psychokinesis experiments. Consequently, a user-friendly measurement of OC in the CMM experiments would be useful. This research note proposes that a single measure, retrospective estimate of duration, accurately reflects the elements/processes within a CMM experiment that are specific and autonomous to that trial and, in the sense that "one cannot step in the same river twice," measures the degree of OC assessed from within.

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## Defining and Maximizing Organizational Closure

In the terms defined by Maturana and Varela (1992) “an organization denotes those relations that must exist among the components of the system for it to be a member of a specific class” (p.43). The class of experiments that the CMM seeks to investigate is one that promotes non-local entanglement correlations.

The term *organizational closure* is associated specifically with Varela and describes an organization of processes such that: “(1) the processes are related as a network, so that they recursively depend on each other in the generation and realization of the processes themselves, and (2) they constitute the system as a unity recognizable in the space (domain) in which the processes exist” (Varela, 1979, p.55). Varela believed that organizational closure is closely related to autonomy and that “every autonomous system is operationally closed” (Varela, 1979, p. 58; Bourguine & Varela, 1992). An autonomous process can be defined as: “undertaken or carried on without outside control” (Merriam-Webster, Definition 1b).

What does Varela’s somewhat abstract definition mean in practical terms for experimental parapsychologists? Below, we highlight four elements of the experimental system implicated in OC and that may be manipulated to maximize OC.

**Attentional:** Primarily this relates to the participants’ engagement with the experiment, the degree to which they are absorbed in the experience. We suggest that retrospective estimate of duration adequately measures this element. However attention is affected by, and is entwined with, the next two elements.

**Emotional/affective:** This subdivides into those elements specific to the participant and the experimenter separately, and those that result from their interaction. That these affective elements are very strongly entwined with the first, attentional, one has been explored by many researchers (see Glicksohn, 2001, for a review). Primarily they involve concepts of arousal as reflected in excitement, anxiety, anticipation, and competitiveness, in the experimenter but primarily in the participant.

The anecdotal observation on successful psi-inducing environments make reference to the degree to which the experimenter can produce a warm, welcoming, honest and trusting ambience that involves a little light-hearted humor and competition. Importantly these elements, in combination with the next, reduce the distraction that would result from apprehension and doubt (Kennedy & Taddonio, 1976), thus maximizing OC.

**Contextual:** This includes the participant/experimenter interaction over the entirety of the participant’s involvement, as well as the physical environment. It includes the important and necessary elements of novelty (Lucadou, 1996) and privacy, as well as the way instructions are given to the participant, reflecting the emotional/affective elements above. Although there is some anecdotal evidence that the presence of a sympathetic experimenter may be helpful, the reassurance that the participant and the OC environment is not being observed from outside the system (either directly or by a camera so that there are potentially multiple observers) is probably crucial to OC (Batchelder, 1984). Whether this is caused by a factor that is theoretically limiting, resulting in decline effects or non-replicability, such as

the NT axiom (Lucadou, Römer, & Walach, 2007; Walach, Lucadou, & Römer, 2014), or some other constraint, remains to be elucidated by experiment. Lastly, although it is not clear what the ideal physical dimensions of the experimental space should be, it is likely to be one that engenders a sense of security, privacy and lack of distraction, thus facilitating attention on the task, increasing OC.

**Motivational:** This element pertains both to the participant and the experimenter, and is less entwined with the other three elements. To some extent the participants' motivation are revealed in their willingness to become involved with the experiment in the first place (unless significant rewards for participation are on offer). Although motivation might include the participant's belief in the possibility of succeeding at the task, the literature on this is so confused, and the term so loaded, as to suggest that it should be avoided in a questionnaire. Again, there may be a case for asking whether the experience matched expectations but without knowing what they were the answers might be misleading.

In the background of this element is the motivation of the experimenter. The specter of experimenter effect has to be considered – then possibly ignored for the present, until the CMM approach is proven beyond doubt. Many of these elements of OC are familiar to experimental parapsychologists as psi-conductive practices and issues and discussed in depth in a series of invited papers collated by Delanoy (1997).

### Time Contraction

The elements of attention and arousal also feature in Glicksohn's (2001) polemical review of the literature. Defending his widely quoted cognitive-timer model, Glicksohn has summarized some of his conclusions:

I have suggested a refinement of the cognitive-timer model for apparent duration, showing how the number of subjective time units and their size covary.... The first conclusion is regarding the strong interplay among attention, arousal, and time perception that is at the base of the cognitive-timer model. Second, a conclusion can be drawn concerning the notion of a single pool of attention that can be deployed in an internally oriented or externally oriented manner, with a necessary trade-off between the two. Third, a hyperbolic relationship between the number of subjective time units and their size is suggested (p.17)... Assuming a common pool of attention, there is a trade-off between externally oriented and internally oriented attention. *The more absorbed the subject becomes in his or her subjective experience (due to a predisposition for high absorption and/or via an experimental technique such as introspection or concentrative meditation), the slower time appears to be.*"(p.9) (Emphasis added)

The result for absorbed participants is that their retrospective estimate of session duration is an underestimate compared to the objective duration of the relevant period measured by the experimenter. This tendency to underestimate may be labeled *time contraction*. The relevance of this to the CMM procedure can be obtained by reverse engineering from the results of past findings in the parapsychological literature. Schmeidler (1982) reported that self-proclaimed psychics hardly differ

from comparable control groups except for one trait, the time contraction trait. Bierman (1988), in reporting a Ganzfeld experiment noted: “the scoring rate of 77% (MCE=25%) for the subjects who showed time contraction is larger than any known scoring rate of a group selected on the basis of a single measure” (p.8). This finding has also been reported by Palmer, Bogart, Jones, and Tart (1977) who used a different measure and also found a positive relation between time-contraction and positive psi scoring.

From the perspective of CMM methodology, the evidence in the parapsychological literature for positive correlations between time-contraction and successful attempts to produce psi suggests that retrospective estimate of duration may function as a measure of OC.

### Measurement of OC: Specifics

In the CMM environment, disruptive or jarring events that might reduce OC should be minimized. A single measure, associated with successful psi performance in the literature, and requiring a minimum of time to implement, using information already available to the experimenter, could be a useful measure of OC. The retrospective estimate of duration by the participant involves a question posed by the experimenter immediately after the end of the participant’s session: “Without looking at your watch, please estimate the duration of this experimental session in minutes from the point I said ‘please start when you are ready’ to the present.” The participant’s answer is recorded, and then compared with the recorded duration to derive a proportional measure of accuracy. Estimates shorter than the recorded time indicate higher OC (absorption) and estimates longer than recorded time indicate low OC characterized by boredom, distraction, lack of motivation, etc. This measure should only be used once with each participant without informing the participant before the session that the question will be asked. Participant awareness before the session is completed that the question may be asked would change the participant’s behavior from one of retrospective estimation at the end of the session to one based on possible continuous awareness/ monitoring of time passing during the session. That, as a distractor from the intention task, is likely to be detrimental to OC. Although the utility of this measure will be proven or otherwise by its use in research using the CMM methodology, the present evidence from both the parapsychological and the time estimation literatures suggest retrospective estimate of duration may function as a useful measure of organizational closure.

### References

- Batchelder, K. (1984). Contributions to the theory of PK induction from sitter-group work. *Journal of the American Society for Psychological Research*, 78, 105-121.
- Bierman, D. J. (1988). A test on the possible implications for OTs of the Ganzfeld research. *European Journal of Parapsychology*, 7, 1-12.
- Bourgine, P. & Varela, F.J. (1992). *Toward a practice of autonomous systems*. Cambridge MA: MIT Press/Bradford Books.
- Delanoy, D.L. (1997). Psi-conductive practices and issues: Introducing invited papers. *European Journal of Parapsychology*, 13, 62.

- Flores, A., Tierney, I. & Watt, C. (2018). *Where mind connects with matter: Replicating the correlation matrix method*. Presentation at the 61<sup>st</sup> Annual Convention of the Parapsychological Association, August 2-5, 2018. Institute of Noetic Sciences, Petaluma, California.
- Glicksohn, J. (2001). Temporal cognition and the phenomenology of time: A multiplicative function for apparent duration. *Consciousness and Cognition*, 10, 1–25.
- Kennedy, J. E. & Taddonio, J. L. (1976). The experimenter effect in parapsychological research. *Journal of Parapsychology*, 40, 1-33.
- Lucadou, W.v. (1996). The Model of Pragmatic Information (MPI). *European Journal of Parapsychology*, 11, 58-75.
- Lucadou, W.v. (2015). *The correlation matrix method (CMM): A new light upon the repeatability problem in parapsychology*. Paper for the 58<sup>th</sup> Annual Convention of the Parapsychological Association and the 39<sup>th</sup> SPR International Conference, University of Greenwich, London. July 16-19, 2015
- Lucadou, W.v., Römer, H., & Walach, H. (2007). Synchronistic phenomena as entanglement correlations in Generalized Quantum Theory. *Journal of Consciousness Studies*, 14, 50-74.
- Maturana, H.R., & Varela, F.J. (1992). *The tree of knowledge: The biological roots of human understanding* (rev. edition). Boston: Shambhala.
- Merriam-Webster Dictionary. <https://www.merriam-webster.com/dictionary/autonomous>
- Palmer, J., Bogart, D. N., Jones, S. M., & Tart, C.T. (1977). Scoring patterns in an ESP Ganzfeld experiment. *Journal of the American Society for Psychical Research*, 71, 121-145.
- Schmeidler, G. R. (1982). A possible commonality among gifted subjects. *Journal of the American Society for Psychical Research*, 76, 53-59.
- Varela, F. J. (1979). *Principles of biological autonomy*. New York: North Holland.
- Walach, H., Lucadou, W.v., & Römer, H. (2014). Parapsychological phenomena as examples of generalized nonlocal correlations: A theoretical framework. *Journal of Scientific Exploration*, 28, 605-631.

### **Mesurer la clôture organisationnelle dans le contexte du MPI/GQT/CMM**

La clôture organisationnelle (OC) est un état théorique de la méthode de corrélation des matrices (CMM) de Walter von Lucadou pour produire des preuves des interactions entre esprit et matière ou *psi*. En termes pratiques, l'OC est affectée par les éléments attentionnels, émotionnels/affectifs, contextuels et motivationnels du système expérimental. Puisqu'une OCE maximale est désirable pour obtenir des corrélations d'intrication non-locales, un outil de mesure accessible de l'OC dans les expérimentations CMM serait utile. En se basant sur des études qui avaient trouvé une association positive entre sous-estimation par les participants de la durée de la session et performance à une tâche *psi*, la méthode suggérée ici implique l'estimation rétrospective de la durée par les participants. Cette note de recherche conclut sur des conseils sur la façon d'implémenter cette mesure.

### **Zur Messung der Organisierten Geschlossenheit im Kontext von MPI/VQT/KMM**

Die Organisierte Geschlossenheit (OG) ist ein theoretisches Konzept innerhalb der von Walter von Lucadou entwickelten Korrelations-Matrix-Methode (KMM), mit deren Hilfe sich psychophysische Wechselwirkungen ('*psi*') nachweisen lassen. In praktischer Hinsicht wird die OG durch aufmerksamkeitsbedingte, emotional/affektive, kontextuelle und motivationale Elemente im experimentellen Auf-

bau beeinflusst. Da zum Zustandekommen nichtlokaler Verschränkungskorrelationen eine größtmögliche OG als wünschenswert angesehen wird, empfiehlt sich eine benutzerfreundliche Messung der OG bei Experimenten mit der KMM. Unter Rückgriff auf Studien, die bei Versuchsteilnehmern einen positiven Zusammenhang zwischen der Unterschätzung der Sitzungsdauer und dem Psi-Treffererfolg festgestellt hatten, verwendet die hier vorgeschlagene Methode die retrospektive Schätzung der Dauer. Die Forschungsnotiz mündet in einen Vorschlag, wie diese Messung berücksichtigt werden kann.

### **Medición del Cierre Organizativo en el Contexto MPI/GQT/CMM**

El cierre organizativo (OC) es un estado teórico dentro del Método de Matriz de Correlaciones (CMM) de Walter von Lucadou para producir evidencia de interacciones mente/materia o *psi*. En términos prácticos, el OC se ve afectado por elementos atencionales, emocionales/afectivos, contextuales, y motivacionales del sistema experimental. Debido a que el OC máximo es deseable para obtener correlaciones de entrelazamiento no locales, sería útil tener una medida de OC fácil de usar en experimentos de CMM. Basado en estudios que han encontrado una asociación positiva entre la subestimación de la duración de la sesión y el desempeño en la tarea *psi* de los participantes, el método sugerido aquí es la estimación retrospectiva del tiempo de los participantes. Esta nota de investigación concluye con consejos sobre cómo se puede implementar esta medida.