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Nonverbal Signals: Capturing What Isn't Said By Applying Technology During Sales Interactions

Sandra Pauser, Lauder Business School

Abstract: Interpersonal skills, encompassing nonverbal signals, have emerged as a significant predictor of sales performance. Thus, in shaping customer perceptions, attitudes, and behaviors, nonverbal cues, such as facial-, and bodily expressions, play an essential role during personal selling encounters. While the significance of nonverbal cues is well-established in sales research, quantifying these behaviors entails significant time- and monetary resources. Additionally, difficulties may arise due to the unconscious encoding and decoding of nonverbal messages and related biases. This paper provides an overview of objective measurement devices, including wearable technology, aimed at overcoming potential biases by examining the dynamics of sales interactions.

Keywords: nonverbal communication, measurement, sociometric badges

IMC Fachhochschule Krems GmbH
www.imc.ac.at
Piaristengasse 1
3500 Krems
Austria, Europe
+43 2732 802
office@imc.ac.at
Firmenbuchgericht: LG Krems an der Donau
UID: ATU 37552304
FN: 79297p

1 INTRODUCTION

The importance of uncovering successful sales behaviors has been on the research agenda for more than a century (Rapp and Beeler, 2021). Quite recently, scholars point to the prominent role of nonverbal communication during sales interactions. These communication behaviors, which cannot be articulated with words, include facial expressions, bodily movements such as gestures, and voice characteristics. If employed effectively, nonverbal signals can convey favorable customer responses (Pauser and Wagner, 2019) by enhancing attitudes, perceptions, and actual behaviors (Pauser, Wagner, and Ebster, 2018).

Besides its significance and positive effects, the measurement of nonverbal communication behaviors is often difficult to obtain in scientific research, as these cues are "encoded and decoded unconsciously" (Stewart, Hecker, and Graham 1987, p. 305). Hence, recent sales research has mainly applied observational methods, which provide various shortcomings including biases (Pulcinelli et al., 2023, p.7). This study introduces an innovative data-collection approach to mechanically capture nonverbal signals of interaction partners during a personal selling encounter - the salesperson and the customer.

2 SOCIOMETRIC BADGES

Sociometric badges were developed at the Massachusetts Institute of Technology Media Lab. These unobtrusive electronic devices are comparable in size to smartphones and are almost imperceptible for the wearer (Kim, McFee, Olguin-Olguin, Waber, and Pentland, 2012). Pulcinelli et al. (2023) describe Sociometric badges as follows: "comfortable, easy to wear, and unobtrusive, allowing for real-time measurement" (p. 7). These wearable devices are equipped with sensor technology (Bluetooth, Infrared, 3-axis accelerometer, and microphones), enabling automatic and objective measurement of nonverbal signals over time, including fine-gained speech patterns and bodily behaviors among various interaction partners (Kim et al., 2012). "To protect anonymity, the Sociometric badges can extract speech characteristics without recording the substance of the conversation" (Pulcinelli et al., 2023, p.7). According to the researchers and inventors at the MIT, Sociometric badges act "with a calibrated precision that is impossible to replicate with observation alone" (Kim et al., 2012, p. 413). Without recording the actual conversation content, the devices are capable of tracing various categories of nonverbal communication messages in real time including: (1) body motion, (2) speech, (3) face-to- face interaction, (4) proximity and (5) interaction patterns (Pauser and Wagner, 2019). Using computer software, the data can be exported to a spreadsheet dataset for further analysis. According to Pauser and Wagner (2019): "The device provides instant feedback to its wearer, which, in turn, delivers various managerial implications for sales executives, trainers, and store managers" (p. 23). Figure 1 visually depicts the Sociometric badge device.

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Figure 1. Sociometric Badge

3 SELECTED RESEARCH CASES

To date, scholars make use of Sociometric badges in various contexts by mainly focusing on dynamic Social Network Analysis (dSNA) (Fischbach et al., 2010). For example, these devices were used to analyze the flow of knowledge within an organization by collecting face-to-face interaction patterns between workers (Fischbach et al., 2010). Other studies in the health care sector investigated team dynamics and performance in healthcare operations (Stefanini, Aloini, and Gloor, 2020), or analyzed interaction patterns between patients and providers in emergency departments (Stefanini, Aloini, Gloor, and Pochiero, 2021). For instance, Stefanini et al. (2020) studied mirroring behaviors (similarity in the behaviors of team members) by analyzing "the speaking (recorded by the microphone), the body movement (recorded by the accelerometer) and the proximity (through the Bluetooth) data series" (p. 1432). In line with that, Pulcinelli et al. (2023) provide an in- depth overview of numerous wearable systems while investigating collective intelligence in clinical settings. In their field study, Pauser and Wagner (2019) applied Sociometric badges in a Marketing context by tracing nonverbal cues of salespeople in brick-and- mortar stores. Findings reveal "positive effects of dynamic (versus restricted/static) nonverbal cues on a salesperson's charismatic appearance, which, in turn, yields favorable customer responses and sales performance" (Pauser and Wagner, 2019, p. 13). Similarly, Kim, Chu, Brdiczka, and Begole (2009) studied shoppers' interest from social interactions in a furniture store by applying wearable sensor technology. More recently, the effect of interactive feedback using Sociometric badges on members' creativity was assessed in an experimental setting (Park, Oh, Lim, and Khoo, 2023).

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FN: 79297p

4 CONCLUSIO

Sociometric badges provide valuable information about communication behaviors which are difficult to obtain via conventional procedures such as survey or observations. According to Kim et al. (2012): “Sociometric badges can capture what an observer or cross- sectional survey might miss, contributing to a more accurate understanding of group dynamics” (p. 412). In sum, these wearables offer valuable and objective insights into the dynamics of sales interactions.

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