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PEDAGOGICAL POINTS TO PONDER

Teaching Cognitive Dissonance Theory:
Practical Advice for the ClassroomJan de Vries¹, April McGrath², and David Vaidis³¹ School of Nursing and Midwifery, Trinity College Dublin² Department of Psychology, Mount Royal University³ Psychologie Sociale Expérimentale, Université de Toulouse Jean Jauré


Cognitive dissonance is an essential theory in psychology. However, communicating its importance to students can be challenging. To address this, the sparse empirical literature suggests the use of lively in-class experiences and worked examples as alternatives to traditional teaching methods. The authors have adapted these ideas and developed recommendations and materials for use in the classroom. The three recommendations are to use common language, highlight the functionality of dissonance motivation, and to rely on real-life examples. These recommendations inform two novel exercises, which use problem-based learning (PBL) in student teams. After an initial naïve discussion of scenarios, Festinger's original conception, Aronson's self-related dissonance, and Harmon-Jones's action-based model are introduced and used as templates for further analysis. The exercises are informed by the literature on cognitive dissonance theory and our experiences teaching this topic and are offered as pedagogical primes ready for empirical testing.

Keywords: cognitive dissonance, teaching psychology, problem-based learning (PBL), inner conflict, social cognition

Supplemental materials: <https://doi.org/10.1037/stl0000346.supp>

Cognitive dissonance is a drive-like state of discomfort resulting from psychological inconsistencies in people's thinking which motivates efforts to reduce or prevent it (Festinger, 1957). Notwithstanding Festinger's lucid introduction of this fundamental psychological theory, teaching cognitive dissonance theory (CDT) can be challenging, as Carkenord and Bullington (1993) ascertained, and the authors have also

experienced. The main reason is the complexity generated by the many revisions of the theory (Metin & Camgoz, 2011). While Festinger's original conceptualization of CDT emphasized the *cognitive* aspect, Brehm and Cohen (1962) shifted the focus to *paradoxical aspects in behavior*. Following this, Aronson (1969), Steele (1988), and Stone (1999), and others considered different ways in which inconsistencies within *self-perceptions* as good, smart, correct, etc. are likely to lead to the most intense dissonance. The *New Look* revision by Cooper and Fazio (1984) highlighted that freely made choices with foreseeable aversive consequences were at the core of how dissonance is generated. More recently, the *action-based model* is gaining ground which suggests that dissonance helps regulate *goal-oriented behavior* (Harmon-Jones et al., 2009). What adds to the intricacy of the theory is that dissonance discomfort can be experienced without

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awareness of the inconsistencies that cause it (Festinger, 1957; Festinger & Carlsmith, 1959) and that efforts to reduce it (think of distraction) may be successful without resolving the inconsistencies (McGrath, 2017). Whether dissonance is a learned aversive response (Cooper, 2019) or an innate process (Harmon-Jones et al., 2009) is still debated and how to measure dissonance is still unresolved (Bran & Vaidis, 2020). Sixty-five years of research and publications have emphasized *contrasts* between the different revisions and remaining issues, which has made the collective core of the theory elusive. This hampers an effective presentation to students.

Based on the experience of three professors and a literature review, recommendations for teaching CDT and two pedagogical primes are proposed using problem-based (Barrows & Tamblyn, 1980) and scenario-based learning (Cormack, 2014) to enhance students' understanding of CDT.

How to Teach Cognitive Dissonance Theory?

Surprisingly, given the centrality of the theory, empirical evidence on *teaching* CDT is sparse. A literature review¹ yielded few papers. Some were focused on dissonance induction as a pedagogical strategy, for instance, to promote critical thinking (Chabrak & Craig, 2013), learning of social justice (Gorski, 2009), to address resistance to diversity (McFalls & Cobb-Roberts, 2001) or to reduce cheating (Stephens, 2017). A small number of papers addressed negative student evaluations of instructors as dissonance reduction strategies after failing an exam (Maurer, 2006). Disappointingly, only two papers offered research on how to teach CDT (Carkenord & Bullington, 1993; Klopp & Stark, 2018).

Carkenord and Bullington (1993) presented an account of an in-class exercise illustrating the hypocrisy procedure (Aronson, 1992). In this exercise, students were asked to indicate agreement with a list of problems (e.g., world hunger) after which they examined their corresponding behaviors (e.g., donating money). The instructors then surveyed students about inconsistencies between their attitudes and behaviors, which revealed that they had experienced dissonance. Students reported this as a valuable learning experience.

Klopp and Stark (2018) taught CDT to students with a *worked example*, which is a step-by-step application of a theory to real-world situations. One scenario they used described a fictitious

student expressing postchoice dissonance about attending one of two universities. Results showed that understanding of CDT after the worked example was superior to a traditional lecture control condition.

What the two studies have in common is that they emphasized the difficulties students had understanding CDT and demonstrated the value of enlivening the concept using examples and reflection on dissonance experiences. The recommendations and exercises introduced in this article take these findings into account and are supported by our experiences of teaching CDT (de Vries & Timmins, 2017; McGrath, 2020).

Recommendation 1: Initially Use Common Language

Terminology within CDT is not as evocative as the theory deserves and may obscure its wide-ranging relevance. To begin with, the emphasis on *cognitive* is perhaps less than representative because it leads away from the *behavioral* element involved. Also, the *dissonance* part of the term generated ambiguity as it initially referred to two different aspects of the mechanism (Beauvois & Joule, 1996; Harmon-Jones & Harmon-Jones, 2019; Vaidis & Bran, 2018): the psychological inconsistency and the affective state arising from it. Generally, researchers now reserve the term *dissonance* to indicate psychological *discomfort*. Despite this clarification, the term on its own does not clearly communicate the process. Also, it does not help that the origin of the term dissonance is in music.

To remedy this, expressions like *oops moment*, *inner conflict*, or *inner turmoil* (de Vries &

¹ To access the empirical literature on teaching cognitive dissonance a broad search was conducted, using the term *cognitive dissonance* WITH *psychology education* OR *higher education* OR *undergraduate teaching*. The following databases were included: PsycInfo, PsycArticles, Medline, CINAHL, Education Research Complete, and ERIC. The search returned over 800 results, focused on: (a) describing instances of cognitive dissonance; (b) using cognitive dissonance to illustrate another concept; or (c) using cognitive dissonance as an educational intervention. Only two empirical papers directly referred to teaching CDT. Although our review of the literature did not cover introductory and social psychology textbooks or online materials, the emerging impression is that while excellent explanations of CDT are provided (see for instance, Weiten, 2021; Aronson & Aronson, 2018; Neuhaus, 2021), interactive exercises and support materials such as we have developed are not commonly accessible.

Timmins, 2017) can be used. The first one highlights the moment of first awareness of dissonance; for instance, when a mistake is made. Like an inner *alarm bell*, it tells us something is wrong, and we should do something about it (de Vries et al., 2015; de Vries & Timmins, 2016). The second and third terms indicate a state that may linger, if unresolved. Understanding also benefits from relating dissonance discomfort to familiar affective states such as guilt, shame, embarrassment, and regret (see Devine et al., 2019; de Vries & Timmins, 2017). Finally, the distinction between dissonance induction and reduction (Tryon & Misurell, 2008) is essential to fully understand CDT. Unfortunately, Festinger's use of the musical term *consonance* to indicate resolved dissonance does not evoke the affect associated with it. In contrast, *relief* or *peace of mind* may communicate this state effectively to students and while these do not cover all dissonance reduction outcomes, they provide an important step toward understanding CDT.

Recommendation 2: Highlight Functionality and Dissonance as Motivation

The idea that dissonance is a fundamental motivating factor in people's lives (Elliot & Devine, 1994) is not always clear from the literature. Therefore, an effort needs to be made to accentuate this. First, dissonance discomfort should be presented as the "engine of cognition" (Gerard, 1992), serving as a regulatory mechanism, preventing disorganization, or chaos in people's thinking and actions (de Vries & Timmins, 2016). Second, with dissonance experienced most strongly whenever the self is threatened (Aronson, 1969; Steele, 1988) the idea of dissonance discomfort as a possible threat to the self needs to be underlined. Third, the action-based model (Harmon-Jones et al., 2009) needs to be introduced. This perspective posits that the motivation for reducing dissonance is first and foremost *the need for effective action*. It would be impossible to safely put one foot in front of the other if people were not alerted to inconsistencies in their movements. In this respect, dissonance is similar to pain. Like pain, dissonance is an adaptive warning signal that helps shape effective behavior and is present in all organisms (Harmon-Jones et al., 2017). Festinger (1957) described dissonance perception as equally

essential as the hunger drive! Gawronski (2012) suggests that this realization needs to be revived in how consistency theories are presented.

Recommendation 3: Adopt Real-Life Examples and Active Debate

While one could conclude from the above that a lot of theory needs to be presented to ensure that students understand CDT, we would advocate to focus first on how the core principle applies in everyday life. This can be done with the use of problem-based learning (PBL), which can be effective in psychology (Muehlenkamp et al., 2015) but is underused (Wiggins et al., 2016). By presenting scenarios as triggers and debating in teams, students can be led to identify important issues (Madson et al., 2020). This principle can be applied to developing an understanding of CDT (de Vries & Timmins, 2012). Importantly, as is suggested by Klopp and Stark (2018), a correct understanding of CDT can be created by including a step-by-step approach in which aspects are worked out with precision. It needs to be mentioned that in many situations, dissonance may be experienced without awareness of the inconsistencies that fuel it. Festinger (1957) addressed this, and studies have shown that dissonance discomfort and dissonance reduction may take place without conscious attention (Levy et al., 2018; Lieberman et al., 2001;). The implication is that students may require some time and effort to gain awareness of their own experiences and therefore that the discussion should take place in unhurried fashion.

Two Pedagogical Primes to Introduce CDT

In these scenario-based exercises, we have adopted the principle of *vigor over rigor* (Dunn, 2008) to generate lively activities and debate to demonstrate dissonance theory's universal relevance. The two exercises provide students with scenarios to analyze after which CDT is introduced. The exercises can be adapted to suit the needs of students and instructors. In classes of between 8 and 30 students, chairs can be put in circles to form several small teams (3–4 students), while in large lecture theaters students can be asked to do the exercises in pairs. No hard data on the effectiveness of the approach are available, yet, but anecdotally our students (undergraduate

and postgraduate, psychology majors and non-majors) show more appreciation and superior understanding of CDT, also in the long-term. The descriptions below emphasize the essential elements. Details for instructors are provided in Supplemental Material.

Exercise 1: Inner Conflict in Everyday Life

In this exercise, an everyday life scenario is presented that most students will have personal experience of. This will facilitate sharing and exploring. The choice of scenarios requires caution. Situations (relationship breakup, violence, betrayal, etc.) that could trigger serious personal dissonance should be avoided. For this reason, we propose to use a common situation with someone begging for money in the street.

The exercise unfolds in two parts. A first part (see Supplemental Material, Exercise 1a) relates to actual experiences of dissonance induction and reduction. The term *inner conflict* is used at this point. The emphasis is on highlighting what inner conflict feels like and what the conflicting beliefs/behaviors are (i.e., *I am a good person who helps people in need vs. I am not helping, so I am not good*). The subsequent focus on what could *make you feel better* allows dissonance reduction efforts to be debated. After this, the formal introduction of Festinger's (1957, Chapter 1) model should take place with cross-referencing of his terminology and common language (Exercise 1b). Following this, McGrath's (2017) article generates a template for detailed analysis of dissonance reduction mechanisms in Exercise 1c in the shape of a worked example. This is intended to highlight dissonance reduction through changing behavior or thinking, justifications, trivialization, adding consonant thoughts, attention shifts, denial (McGrath, 2017), or disengagement (Pillai, 2021). The best approach is to allow students to generate their answers and discuss the examples afterward (see Supplemental Material, for grids to fill with proposals for instructors). Additional scenarios could focus on dissonance experiences such as consumer regret (Powers & Jack, 2013).

Exercise 2: Processing Consistency/Inconsistency at Different Levels

The second exercise (Supplemental Material, Exercise 2) is a worked example of consistency/

inconsistency processing at different levels. This allows for the introduction of the action-based model (Harmon-Jones et al., 2009; Harmon-Jones & Harmon-Jones, 2019) and Aronson's (1969) self-related approach. The instructor presents examples of events involving inconsistency at the level of actions, attitudes, and the self. The task for the students is to identify the inconsistency, resulting emotion, and dissonance reduction options. The emerging awareness should be of different levels of dissonance processing, their varied impact on the intensity of dissonance discomfort and dissonance reduction. Moreover, the realization should occur that dissonance is part of an adaptive regulatory system that supports goal directed behavior and prevents chaos in cognitions and behavior. The overall outcome should be a comprehensive appreciation of CDT and its application in the real-world.

Conclusion

While a formal presentation of CDT is not always well-understood, a lively problem-based approach to learning may overcome this problem. In essence, we have expressed the view that the dissonance mechanism needs to be explored *before* the theory is presented. After this, theory can be used as a template for further exploration. This should help students to become more insightful in applying this core aspect of psychology to better understand themselves, others, and the world we live in.

We invite colleagues to do the exercises with their students and share their experiences. Multiple choice questions can be requested from the authors to test students' understanding (see samples in Supplemental Material). These can be used to compare an experimental group, which receives the two exercises followed by introduction of the theory, with a control group, which only receives the theory in traditional lecture format. Evidently other research formats can be considered. For instance, the order of interactive exploration and lecture can be varied, and the effectiveness of the exercises and different lecture approaches and content can be compared. However, what we hope more than anything is that this article can be the start of a debate on the teaching of CDT.

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