Engaging Theories in Interpersonal Communication

Multiple Perspectives

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Truth-Default Theory

Changing Our Understanding of Human Deception

Timothy R. Levine

Welcome to Truth-Default Theory (TDT hereafter). My name is Tim Levine and TDT is my creation. TDT is a new theory of interpersonal communication that focuses on deception.

TDT makes several claims that distinguish it from other theories of human deception. As its name implies, TDT says that people generally communicate from within a default mindset where other's communication is passively and uncritically accepted as honest. Suspicion requires a "trigger," and even then, people are still truth biased. According to TDT, this is a good thing because it allows for efficient and effective communication.

TDT rejects the idea that deception can be detected in real time based on verbal and nonverbal cues. Cues and demeanor (impressions that are conveyed) affect who is believed, but lack diagnostic value in deception detection because some people are "mismatched senders" who come off opposite of how they really are. According to TDT, deception is more accurately detected through communication content, evidence, and persuading people to be honest. Deception is also usually detected after the fact. TDT makes further predictions about how often people lie and when and why people lie. I will expand on TDT's claims throughout this chapter. The full explication of the theory is in my book *Duped* (Levine, 2020) where entire chapters are devoted to issues that are only briefly mentioned here.

TDT has become known outside academic circles thanks to the bestselling author Malcolm Gladwell. TDT inspired Gladwell's (2019) book *Talking to Strangers*. Because of Malcolm, Oprah actually voiced the words ". . . now going to become a cultural phrase, and everyone is going to be talking about the truth default" (Winfrey, 2019, 17:09). Although surely Oprah exaggerates, it is nice to hear Oprah and Malcolm engaging in communication theory. Here, I will do my best to engage you in TDT. Let us talk theory.

Intellectual Tradition of Truth-Default Theory

Although many people may consider TDT a post-positivist theory, it is not a label that I endorse. Along with Meehl (1989, 1990b) and Campbell (1990), I think that logical positivism has been misunderstood in the social

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sciences and that the post-positivism label lumps together many different perspectives, many of which do not characterize my approach. I endorse a view of meta-theory generally along the lines described by Meehl (1989, 1990a, 1990b). My view is *post*-positivist, *post*-Popperian falsification, and *post*-Kuhnian revolutions in that it was developed after the heydays of these philosophies and with their shortcomings in mind. If a label is required, I might choose "The Meehlian Corroboration-Verisimilitude Theory of Science" (Campbell, 1990) following the eight summary statements in Meehl (1990b), as well as Meehl's ideas about risky tests, verisimilitude, and the problems with significance testing.

TDT grew out of and resides in quantitative, experimental multidisciplinary social and life science. It is unconventional and aggressively confrontational with most other theories of deception, although Steve McCornack's Information Manipulation Theory (IMT) and IMT2 are exceptions (McCornack, 1992; McCornack et al., 2014). TDT and IMT are compatible sibling theories.

I am deeply committed to the idea that there is a reality to things. Some human beliefs are more in line with the nature of things than others. As I write this, the world is in midst of the COVID-19 pandemic. I believe that this new virus exists, that it is contagious, and that it can be deadly. If I thought it was all a hoax, I might not stay at home, I might not wear a mask and I might not wash my hands. But, such beliefs would not keep me from catching it, and it would not stop me from infecting others. This is because the virus is a real thing regardless of what I think about it.

Theories need to line up with facts, and theories do not get to cherry pick among the facts. If we misunderstand how viruses function and spread, then we are at greater risk. The more our theories get things right, the better we will know how to stay safe, develop effective treatments and vaccines, etc. Of course, most communication theories are not matters of life and death, at least not on the devastating scale of this current pandemic. Yet, being right still matters because effective communication is really important. Getting it wrong can cost you a job or a relationship. As Gladwell (2019) points out, there are cases where people reading other people wrong turned out to be fatal. It can also result in having your life savings swindled, failing to catch a spy, or the unjust imprisonment of an innocent person. *Talking to Strangers* is a series of examples of how communication can go very wrong. This is why it is vital to have correct understandings.

TDT draws from disciplines such as linguistics, philosophy, sociology, neuroscience, behavioral economics, and evolutionary biology. I collaborate frequently with co-authors from fields such as criminal justice (Pete Blair) and marketing (Kim Serota). Although I draw heavily from psychology, I am critical of influential psychological theories by Paul Ekman and Aldert Vrij. I think modern legal-criminal psychology mostly gets deception wrong. I reject the idea accurate deception detection is a matter of properly recognizing verbal and nonverbal deception cues. I also do not believe

liars are especially strategic or that deceptive communication is inherently more cognitively demanding than being honest (also see McCornack et al., 2014). For example, a message that is both honest and attentive to the other person's face needs is often more difficult to construct than a simple face-supportive lie.

McCornack and Parks's (1986) classic experiment was the starting point for TDT. That was the first study to test how accurate college dating couples were at detecting each other's lies. They found that the closer the relationship, the more the young lovers thought they could spot their partner's lies. The more confident they became, the more they were truth-biased. Truth-bias, in turn, reduced detection accuracy. In fact, the term *truth-bias* was coined by McCornack and Parks. TDT research began in the late 1980s and early 1990s as an effort to understand truth-bias. As it turns out, most people are truth-biased, yet as we will soon see, it is not really a bias. It is also not just a romantic partner or a college student thing. Truth-bias is an exceptionally robust finding.

Along with the original McCornack and Parks (1986) article, another essential inspiration for TDT was Harvard Psychologist Dan Gilbert's theorizing about how people mentally represent true and false information (Gilbert, 1991). Gilbert, in turn, got his idea from seventeenth-century Dutch philosopher Baruch Spinoza. The upshot is that believing something is a cognitive default and unbelieving requires subsequent willful effort. Thus, the idea of the truth-default flowed from Spinoza, to Gilbert, to me. I applied it to communication, deception, and truth-bias, eventually building TDT around the idea that believing others is the default.

The third cornerstone of TDT came from an idea by Hee Sun Park called the "veracity effect" (Levine et al., 1999). The idea is that so long as there is an equal number of truth and lies in a lie detection task, true-bias does not lower accuracy. What truth-bias does is increase accuracy for truths and lower accuracy for lies. The gains and losses average out. Truth-bias only hurts raw accuracy in situations where lies are more frequent than honest messages. Consequently, the veracity effect not only puts TDT at odds with the McCornack and Parks's (1986) model, it also makes TDT incompatible with Interpersonal Deception Theory (IDT, Buller & Burgoon, 1996), which suggests that truth-bias reduces deception detection accuracy (Buller & Burgoon, 1996; Burgoon, 2015).

This particular discrepancy prompted me to investigate how often people lie. The short answer is that most people do not lie much. In fact, my first study with two of my colleagues found that 75% of Americans lied less frequently than average (Serota et al., 2010). If you are wondering how that can possibly be true, TDT's first two propositions specify not only that most people are honest most of the time, but also that the distribution of lying is highly skewed and that most lies are told by a few prolific liars. The big implication here is that if most communication is honest, then truth-bias is not a "bias" at all. It only looks like a bias when researchers put

research participants in artificial communication environments where lies occur much more often than they do outside the lab. Moreover, this means that IDT's prediction about truth-bias lowering accuracy is wrong in the vast majority of communication situations where honesty prevails. If you are not conversing with a pathological liar, a sociopath, or someone in the midst of a psychotic break, believing others will probably improve truth-lie discrimination.

The final inspiration for TDT was another of Hee Sun Park's insights. Just about everyone (theorists, researchers, popular psychology gurus, and everyday people from around the world) thinks that nonverbal behaviors are linked with lying (cf. Bond et al., 2006). People believe things like liars will not look you in the eye or liars act nervous. Hee Sun just asked people, open-ended, to tell her about a time they were lied to, and how they found out (Park et al., 2002). Real-time nonverbal behaviors had very little to do with it. Most lies are detected after the fact based on evidence or sender confessions. The dynamic interactive sequence depicted by IDT characterized only about 2% of the lie detection narratives. TDT was created with the other 98% in mind.

Main Goals and Features of Truth-Default Theory

There are several interrelated goals of TDT. As I wrote in the preface to *Duped*: "My objectives here are ambitious and radical. I want to start a revolution. I seek to overthrow existing deception theory and provide a new, coherent, and data-consistent approach to understanding deception and deception detection" (Levine, 2020, p. X). Therefore, my goals were, in part, epistemological and ontological. I was (and still am) looking to change both how we understand deceptive communication and the evidentiary standards for evaluating communication theory.

A related goal is making good sense of prior research findings. TDT seeks not only to align with the fact pattern produced by eight decades of prior deception research but to make the findings cohere. If we think of the thousands of prior findings as individual colored tiles, TDT is creating a mosaic. Rather than a confusing pattern of "mixed results," TDT is doing a re-shuffle so that we can see how the pieces all fit together to form a comprehensible whole (Gestalt psychology was another influence).

But TDT is not only backward looking. TDT seeks to make predictions that no one would think to make otherwise. When we look in those new places, things turn out just as TDT predicts. This, according to Lakatos (1978), is the real test of a good scientific theory. Here is a selection of a few of my favorite examples.

I already mentioned lie prevalence. Before TDT, everyone thought in terms of averages. People were thought to lie once or twice a day. This is true "on average." But because the distribution is skewed like TDT predicts, the average does not describe most people. Prior to TDT, no one gave much thought to the shape of the distribution. Now, when researchers look, there the skew is. So far, the skewed distribution prediction has held up in nationally representative surveys from four different countries, as well as in a number of student samples and in reexaminations of diary and experimental data (Levine, 2020).

A second example is a study of deception detection in text messaging by Reynolds et al. (2014). Pairs of friends came to the lab with their cell phones and uploaded several of their text messages. Senders identified which were honest and which were deceptive, and their friends rated the messages for honesty. Friends were scored for accuracy. How accurate were the friends? As a point of reference, McCornack and Park (1986) reported 59% correct for the dating couples in their experiment.

If you didn't know IDT or TDT, you might guess 54%, as that is the average across deception detection experiments (Bond & DePaulo, 2006). If you were an IDT theorist, however, and you learned that the friends in the study were highly truth-biased, then you would predict even lower accuracy because your theory tells you that truth-bias lowers accuracy and because text messages are often quite short and lack behavioral information to support accurate lie detection. TDT, in contrast, suggests something very different. TDT says most communication is honest. This applies to all communication including texts. TDT also says that people are truth-biased. Because of the veracity effect, believing others makes us right about honest messages. Thus, TDT predicts that most texts are honest and accuracy must therefore be quite high because the honest messages are likely to be correctly believed. This is just what was found (89% of messages were honest, 94% of messages were believed, and accuracy was 83%). Without TDT, we might conclude that accuracy for text messages is very different than other types of communication, or that the finding was an extreme outlier. With TDT, the findings both make sense and could be anticipated.

In the text message experiment, receivers were asked to rate messages for honesty. Almost every deception detection experiment does this. But, if you understand TDT, you might wonder what would happen if research participants were not directly asked by the researchers to rate deception-honesty. Would the possibility of deception even come to mind? TDT says no. Asking people about deception brings thoughts about deception to mind, negating the truth-default. Clare and Levine (2019) did two deception detection experiments where, instead of asking about deception outright, participants were just asked to list their thoughts. As predicted, thoughts about deception were infrequent, even in response to implausible lies. Before TDT, no one ever even thought to study deception detection this way. Knowing TDT, it is odd that this was not done long ago.

My final example comes from two deception detection experiments involving professional federal interrogators. Unknown to either set of researchers at the time, IDT authors (Dunbar et al., 2015) did an experiment similar to one conducted by my team (Levine et al., 2014). For the present discussion, two

differences are critical. According to IDT, receiver skill at interpreting sender strategic and nonstrategic behaviors determines accuracy. TDT, in contrast, holds that expertise is not about reading people, but knowing what questions to ask and how to prompt diagnostic communication content. Consequently, the IDT researchers scripted questions for the experts to ask, whereas the TDT method required that the experts come up with their own questions. A second difference involved confessions. In TDT, persuading honest confessions is one of five ways to improve accuracy. Honest confessions that were believed were counted as accurate. Seeking honest confessions is not a part of IDT, so they discarded data involving interviewees who confessed under questioning. The results? The IDT experiment reported 59% accuracy compared to 98% accuracy in the TDT experiment. Levine et al. (2014) reported some of the highest accuracy ever published in a peer-reviewed journal. TDT showed us the path to finding higher accuracy.

Above all, TDT seeks verisimilitude—predictions and explanations align with the data. TDT is not OK with "mixed results." It does not seek to be partially right or applicable only in a narrow bandwidth of tightly controlled, finely calibrated experimental settings. For TDT, evidence of verisimilitude is achieved through extensive replication. It strives to avoid the fate of undead theories (Ferguson & Heene, 2012). The sad state of modern social science was documented by the Open Science Collaboration (2015). The project involved trying to replicate 100 experiments in leading peer-reviewed journals. Even with an average replication power above 90%, only about one-third of the original experiments were replicated. The average effect sizes in the replication were less than half that of the originals. One disturbing interpretation of the results is that published findings are more likely to be wrong than right. The findings also suggest that individual studies usually overestimate the strength of predicted effects.

TDT seeks to avoid having its support evaporate by testing its claims and predictions over and over with new and different twists each time to ensure that the results stay the same. *Duped* (Levine, 2020) provides 55 numbered TDT studies showing consistent findings, and supportive evidence has been collected in North America, South America, Europe, The Middle East, and Asia. The participants are college students, business professors, NSA agents, customs agents, police, and others. I am collecting new data continuously. Other labs are testing TDT too.

Finally, it is worth noting that TDT is modular and abductive. By modular, I mean it is made of mini-theories, models, and effects that can stand alone or that be combined into the larger TDT framework. By abductive, I mean its construction follows a Cialdini-like method of observation, tentative explanation, test, and repeat the test again and again. Here, IDT again provides an informative contrast. The first IDT studies were conducted about the same time and involved many of the same variables as the first studies of mine that would evidentially lead to TDT. In IDT, the theory was developed first, then research testing the theory followed. In TDT, the research came first. The modules were created one at a time,

tested, replicated, and refined as needed. The modules were the building blocks, and creating TDT was an exercise in arranging the blocks in a way that would form a solid, logically consistent, and esthetically pleasing theoretical structure. As the structure gradually came together, the shapes of the missing blocks became apparent, so I knew what I had to look for. Then it was just a matter of stress-testing the structure to be sure it was stable and would hold up against critics and new data.

How Communication Is Conceptualized in Truth-Default Theory

TDT views communication as an essential facet and defining feature of human nature and human life. We evolved as a profoundly social species, and our ability to communicate with our fellow humans has indelibly shaped human progress and human history (cf. Harari, 2015). Among other important things, communication lets us pass along knowledge. You can learn about deception from me even though we have never met. Take a moment to imagine what human existence might be like if we could not share knowledge so efficiently.

When I teach classes in human communication or interpersonal communication, I often begin with the research of John Cacioppo (Cacioppo & Patrick, 2009). Cacioppo is most well known in communication for the elaboration likelihood model of persuasion. But I think his work on social isolation is more impressive. Cacioppo was seeking to understand the strong link between social isolation and mortality. Why do socially integrated humans live longer than lonely people? He found that being isolated made people more suspicious of their fellow humans, this hurt the quality of their relationships, it interfered with their sleep, and over time, it resulted in hormonal changes that lowered immunity at the cellular level. This makes a compelling case for the importance of communication.

According to TDT, for communication to function, we must believe others. If we second guessed everything we read or heard, communication would quickly bog down and become dysfunctional. Efficient and effective communication requires the truth-default. Doing otherwise leads to solipsism. There is a catch, however. The truth-default makes us vulnerable, at least in the short term, to deception. But, because deception is relatively infrequent and often about not-so-important things, the tradeoff is worth it. Sure we get duped once in a while, but in return, we get efficient and effective communication that allows us to cooperate, coordinate, learn from each other, and develop meaningful relationships.

Research and Practical Applications Using Truth-Default Theory

Several research applications were mentioned previously in the Main Goals section. Let me tell you about one more research application, and then I will move on to practical applications. I am currently collaborating on an

experiment with some neuroscientists on my campus. According to most theories of deception, lie detection involves reading the nonverbal behaviors of others. It would follow, then, that people on the autism spectrum might be especially poor lie detectors. However, according to TDT, people's nonverbal behavior can be misleading, especially for what I call mismatched senders (individuals whose self-presentations do not match their internal states). People on the spectrum might actually be more accurate lie detectors with mismatched senders. The inability to "read into" nonverbal behaviors should be an advantage because trying to read other's demeanor is what makes poor lie detectors according to TDT.

Regarding practical applications, recently I did Grand Rounds for the Department of Surgery at UAB. Deception by patients is a big problem for doctors. For example, patients are not always honest about requests for pain medications. It is useful to know better than to rely on the appearance of sincerity. I explained the value of fact-checking where possible, considering motives, understanding communication content in context, and persuading honesty.

I have also recently been working with FBI profilers. TDT is popular with the profilers and they find it very useful. TDT has obvious implications for things like cybersecurity, counterintelligence, and criminal interrogation, all of which are relevant to the FBI.

Recently, I wrote an expert witness report for the defense in a Federal case. The defendant was charged with criminal conspiracy. The defendant's defense is that he was duped by the actual criminals. He says he did not know, and just took people at their word. Of course, I cannot get into his head. I do not know if he was in on the crime or not. In the evidence I reviewed, the case against him looked circumstantial. There were numerous warning signs of criminal activity, and the prosecution's theory of the case is that he had to have known what was going on. TDT says otherwise. There is more than reasonable doubt that he was truth-biased, even in the face of suspicion-provoking information. After my report, the prosecution decided not to go to trial after all. Maybe TDT helped keep an innocent person out of prison.

My next example of a TDT application is something I call the BQ (believability quotient). The BQ (Levine, 2020) is a list of 11 "dos" and "don'ts" that make a communicator appear sincere-believable or sketchy-creepy-dishonest. The BQ determines what I call honest sender demeanor. Who would benefit from coming off as honest and sincere? Certainly, anyone going through a TSA or customs checkpoints at an airport or anyone being pulled over by the police would want to appear honest. Salespeople need to come off as sincere, as do attorneys, politicians, and even teachers. The BQ is quite valuable for someone interviewing for a job or trying to make a good impression on a romantic interest.

My final comment about the practical application is that this is why verisimilitude matters so much. If your theory is being used to inform national security and you get something wrong, this could be really bad. How could you live with yourself if some terrorist was successful because security professionals were following your bad advice?

Evaluating Truth-Default Theory

In terms of scope, TDT applies broadly across cultures, media, and relationships. It is clearly testable as many examples have shown. In terms of parsimony, it is more complex than most due to its modular construction, but it makes up for that in utility and heuristic value as demonstrated in several previous examples.

Evaluated on its own terms, TDT has been unequivocally and remarkably successful. TDT's goals are to align with and explain research findings, and to make original and robust predictions that check out and replicate again and again. On these scientific standards, TDT shines brightly. Obviously, this could change as new research findings are generated.

For thinkers who are more comfortable letting all flowers bloom, living and let live, valuing all ideas equally, and/or who are intellectually conflict avoidant, then TDT is not a happy-place theory. TDT is much too militant for some scholars' sensibilities. TDT is not for people who dislike numbers either (as reviews of *Duped* on Amazon.com document). Thus, TDT's beauty is surely in the eye of the beholder. It depends on what you want from a theory.

Continuing the Conversation

If you want to learn more about TDT, my book, *Duped*, is the go-to resource. You can also google my webpage or email me. If you attend a professional conference, such as those sponsored by the National Communication Association and the International Communication Association, you can see me there (after the current pandemic). I am happy to talk communication theory over a beverage.

As for what is next for TDT, that is unclear. I am currently involved in or in the process of planning a slew of new studies. One priority is adding more pan-cultural tests of TDT. It would be interesting to try to replicate Clare and Levine (2019) in regions like Southeast Asia or Russia. Time will tell what the new research will find. The data are the data, and I am committed to data regardless of whether they are supportive or not. Getting things right is important; me being right, not so much. To quote the autobiography of one of my favorite professors, Jack Hunter: "I learned early that I am a dust mote surrounded by a universe that gives me an importance rating of 0. You can only control the universe if you play by its rules. Knowledge is the only real power" (Hunter, 2000, p. 1).

I hope the Clare and Levine (2019) method of testing TDT will catch on. Mostly, though, TDT is now out of my hands. I have gone public with

it. Others can use it in their own research, apply it in their own contexts, morph it, mold it, and stretch it. Maybe they will stomp on it. My role is shifting from creator to spectator. If people do not like TDT, I will counter-argue if I think I am on firm ground, but I will not object to objections. That would be hypocritical. When you put your ideas out there, you have to come to terms with the good, the bad, and the ugly consequences of doing so. That is how it is (at least, according to me). That is my story and I am sticking to it at least until the data tell me otherwise.

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