Confusion: An Exploratory Conversation on Meaning and Tools to Address Confusion at Work

Frank Rouault DBA, Principal at Practical Learning the smart way to learn[™], www.practicalearning.com, Paris, France.

Phillip Pardo, Professor of Finance & Accounting, Ritsumeikan Asia Pacific University, Beppu, Japan.

Malcolm Cooper PhD LLM, Emeritus Professor, Ritsumeikan Asia Pacific University, Beppu, Japan.

William Claster PhD, Professor, Ritsumeikan Asia Pacific University, Beppu, Japan.

"I'm confused; I feel confused; I get confused."

Abstract: In our work and everyday life there is not a day that passes where we do not hear about someone being confused about something, but they carry on. This prompted us to explore the subject and we soon realized that that the notion of confusion merited dedicated effort towards clarification and practical usage. We have initiated several qualitative conversations in the workplace to help our clients exploit confusion as an opportunity. In this paper, we review our understanding of the current conversation about confusion and present a set of tools that we have sketched as supporting ideas to help manage this condition. We describe (1) the findings of convenient sampling based short qualitative interviews with 20 Academics and business people in France and Japan on "what is confusion to you"?; (2) An early list of + ten typical confusions we observe in the business world; (3) A management cycle to help address confusion that we name the TAPE Cycle where we tag confusion, act upon it, build on our initiative to address it and expand on our practice to fully digest it so we can face new

confusion situations; (4) An exploratory reason for confusion checklist; (5) A confusion – clarity index; and (6) A confusion matrix assessment tool. At this stage, our combined business and academic backgrounds lead us to believe that these actions carry valuable insights, but we seek to inform the reader that solid research needs to be engaged as this process falls into the category of early theory building.

If you're not confused, you don't know what is going on. Rory Devaney (Brad Pitt) in *The Devil's Own* (1997)

1. Introduction

Our entrepreneurial, consulting, and teaching practices have led us to observe that business actors with good intentions can see themselves and their activities as victims of the confusions they themselves make. Numerous contacts have admitted that the COVID-19 crisis has generated immense confusion among managers: they are unsure how to motivate employees while maintaining their engagement in production, the organization, workplace relationships, presence in the market, the organization while teleworking, and so on. However, our research has led us to believe that confusion of this type is in fact a primary and important reaction to thinking about and addressing the chaos or complexity of the unknown. Thus, while for Singh and Singh (2002), chaos is a condition or place of great disorder or confusion and leads to the unpredictability of specific behavior within a predictable general structure of behavior, Lefebvre and Letiche (1999) described chaos as a space of infinite emptiness waiting to be organized. This is because it represents a potential entering into an open system where complexity is a form of experimentation within which meaning and (dis)similarity match. Lefebvre and Letiche (1999) further argue that although acceptance of chaos can be a painful awakening to confusion and uncertainty and forces acknowledgement of our lack of knowledge, information, and skills in a complex situation, it is not necessarily detrimental to effective behavior. Reeves, Levin, Fink, and Levina (2020) defined complexity as a large number of different elements (e.g., specific technologies, raw materials, products, people, and organizational units) that have many different connections to one another. Both qualities can be a source of advantage or disadvantage, depending on how they are managed.

Ritchie-Dunham (2005) commented that we experience this state of confusion when we lack clarity: on a personal level whenever we make an obvious mistake and say to ourselves, "I knew better than that"; at a group level it occurs whenever someone states after a group blunder, "I could have told you that if you would have asked"; and at an organizational level, whenever we see intelligent, passionate people with years of experience make seemingly stupid decisions. Kang (2015) argued that confusion occurs when people use the same terms and concepts and unconsciously think other people's understanding of the term or concept is the same as theirs.

The American Psychology Association (n.d.) defines confusion as a mental disturbance characterized by bewilderment and the inability to think clearly or act decisively, and this includes disorientation for time, place, and person. It is a sense of a discomfiture of mind, a state of being disconcerted and experiencing perplexity, doubt, and uncertainty according to Pauli (1960). He further argued it is the feeling of difficulty in a situation and the stimulus as well as the origin of thinking on how to deal with it. In 1923, Arnold described confusion as:

"the intermixing of similar things belonging to two or more persons in such manner that the original portions cannot be distinguished. The new product is the same in kind as the preexisting materials. Intermixture and confusion are not synonymous terms. Intermixture may exist without confusion, but confusion can never exist without an intermixture" (Arnold, 1923, p. 235).

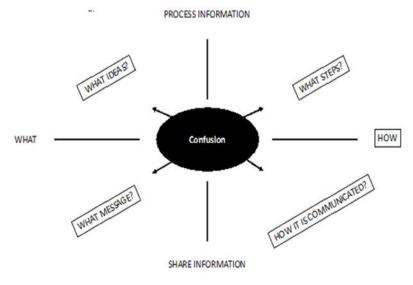
Turner (1940) commented that confused thought and opinion was the distinctive intellectual quality of the times. From it springs the inertia, the hysteria, the arrogance, and the opportunism that everywhere characterized action. Neither tradition, nor religion, nor learning, nor even economic interest asserts a truth to which all hold fast, believing in themselves as they suffer for their faith. Only crude power that serves no other end than its own exercise is certain. And inculcated confusion this makes the means of further aggrandizement. In this paper, which is an early exploratory conversation, we review confusion and highlight prospective tools to address it, including those built on participants' reactions. We close this early scouting on confusion by reflecting on the academic and practical implications furthering our exploration.

2. Literature Review

The Cambridge Dictionary (n.d.) defines confusion as a situation in which people do not understand what is happening, what they should do, or who someone or something is. The Oxford Learner's Dictionary (n.d.) refers to it as a state of not being certain about what is happening, what you should do, or what something means. Merriam-Webster defines it as a situation in which people are uncertain about what to do or are unable to understand something clearly, emphasizing the feeling you have when you do not understand what is happening, what is expected, etc., and refers to a state or situation in which many things are happening in an uncontrolled or unorderly way.

Two words appear as antonyms to confusion: certainty and clarity. We choose to disregard certainty, which implies a subjective sense of conviction or validity about one's attitude or opinion (Gross, Holtz, & Miller, 1995), and therefore represents for us a limited perspective. Confusion and uncertainty as well as clarity and uncertainty about a topic are possible options, but a combination of confusion and clarity about a topic appears to be less likely. Clarity refers to the quality of thinking being clear and easy to understand, seen, heard, and remembered. This is in keeping with previously proposed definitions of confusion; we are therefore prone to consider clarity as the inverse of confusion. We have not heard the sentence "I'm confusedly clear": although we have heard "I'm too confused to be clear" in the specific context of "regretting bringing bad news" with some sense of humor, for example, but "I'm clearly confused" represents an explicit and practical statement. Clarity is even described as the "antidote to confusion" (McElhaney, 1988). These definitions and our empirical reflection lead us to think that confusion occurs in information processing and information sharing and concerns the *what* and *how* of these factors (see Figure 1).





Accessing the academic database JSTOR, we observe that the term *confused idea* is mentioned 562 times, *confused steps* 16 times, *confused messages* 51 times, and *confused communication* 21 times.¹

We therefore define confusion as a feeling derived from a situation that reflects a lack of understanding of what is occurring (idea and/or message) and/or on the course of action to take in this situation (steps and/or communication). Bigelow (1948) talked about "an error made in good faith" and for Moneymarketing (2009), this is a "mix up of two separate things" "to make something difficult to understand." Rochat (2003) presented confusion as level 1 of a six level self-awareness matrix (confusion, differentiation, situation, identification, permanence, and self-consciousness), as "self-awareness is the experience of ourselves fluctuating through these layers as we act, perceive, and think in the world".

Rantanen (2017) commented that confusion is one of the knowledge-related emotions along with curiosity and surprise that has an important message for you: "I don't know enough to take any action yet." Lombroso (2015) stated that confusion is a signal that we are on the path to learning, and that it is an outcome to embrace. Confusion appears to be our initial reaction to complexity and the unknown, and Plaut (2006) observed that it is a misconception. Silvia (2009) argued confusion is considered an emotion experienced in the same contexts as interest, but it is a signal of an impasse in information processing that can ultimately lead to greater investment of resources or withdrawal. Fayn et al. 2019; and Leuven (2019) noted interest and confusion could be considered the most

¹ We wish to highlight the point developed by Minkov and Hofstede (2011) that we are constructing the framework developed in this paper, not the reality itself but imaginary models we build in order to organize our impressions of the observed reality in a way that makes sense for us and, hopefully, others.

basic and important states experienced during engagement with information. This idea is highlighted in a quote attributed to Tom Peters: "If you're not confused, you're not paying attention" (Heywood, DeSmet, & Webb, 2014).

Following these definitions and when reflecting upon the anatomy of confusion, we concur that confusion: (a) is a feeling associated with not knowing how to perceive a situation and/or how to act upon it (I feel confused); (b) is not a permanent state and can be transformed (we can go from confusion to clarity); (c) starts with a SPARK; (d) has a speed; (e) can appear accidentally or be created intentionally; and (f) causes people, in general, to comment that they do not like it. We observe signs that show we are in a state of confusion. which include: we freeze. we demonstrate hypersensitivity, we experience more intense emotions and feelings, we may let our emotions drive our actions, become impatient, we may use derivatives, we may hide, think, organize, and plan the structure of our critical steps, or act (as groups if possible).

Confusion may be the consequence of accidental events (what to think and how to act when confronted for the first time with a natural event, like a tsunami) and intentional strategies (the Trojan horse in Homer's Odyssey or the Fortitude Initiative in WWII to deceive the Germans on chosen Allied European landing zones). Furthermore, humans are intentional beings with five different levels from necessity to conscious intent (Lewis, 1990); therefore, intentions may be abstract and cause an outcome or be the fruit of specific plans causing that outcome (Markman, 2010).

However, in this paper we seek to focus our confusion conversation in a strict business context. We are not discussing confusion in a medical context where it is understood as the mental state of a patient who is probably disorientated, has poor attention span, or is experiencing perceptual abnormalities, such as illusions and hallucinations (Farooqi, Kouyialis, & Brodbelt, 2006). Kapferer (1995) addressed brand confusions related to business and discussed perceptual and behavioral confusion. Mitchell and Papavassiliou (1999), through their work on consumer confusion, concluded that confusion is a state of mind that affects information processing and decision making and argued that confusion consists of three types: similarity, overload, and ambiguity. Similarity refers to perceived physical similarity of products and services, overload refers to an information-rich context hard to process, and ambiguity refers to diversity of assumptions towards an offer. This was further developed by Shiu (2017), who linked customer confusion (similarity, overload, and ambiguity confusion) to antecedents (stimuli and store knowledge) and the consequences (decision postponement and inertia). Sertoglu and Kavak (2017) argued personal characteristics play a relevant role with regards to confusion. Plaut (2006) described the four facets of confusion: nature, type, cause, and response. On the other hand, Babian and Kessler (1956) highlight the fact that economic clichés are commonplace in confusion, arguing "pat words and phrases as we have all learned at some time or another, can hide an awful lot of sloppy thinking".

Reviewing academic databases and mainstream newspapers leads us to observe that confusion is associated with a variety of situations. We rapidly came across a sea of confusion (Stecker, 2016): cross-border confusion (Schulz, 2020); climate confusion (Mastaglio, 2020); governance confusion (McGrath & Whitty, 2013); the magnitude-of-career confusion among college students in India (Mini, Christopher, & Janetius, 2020); the confusion matrix in credit scoring (Zeng, 2020); confusion brought to Japanese traditional ways of working (Takenaka, 2020); sex and gender confusion (Borna & White, 2003); the confusion of fear and surprise (Roy-Charland, Perron, Beaudry, & Eady, 2014); confusion in trade mark and company names (Lisinskaité, 2011; and e-confusion (Mitchell & Walsh, 2005) caused by too-similar, too-many, and unclear stimuli face-to-face and on the Internet. Discursive confusion arises from the simultaneous existence of multiple, continuously changing, and partly clashing discourses of sustainable consumption as well as the associated discursive struggle consumers need to deal with when trying to make sense of their roles and responsibilities sustainable development in (Markkula & Moisander, 2012). It also refers to a dual diffusion/confusion encryption technique to increase the ambiguity of ciphertext (Rehman & Liao, 2018), such as the so-called confused message about the escalation of the U.S. military presence in Europe (Bertuca, 2014).

When we searched for the term confusion on *Business Source* Complete, we found 215,733 references connecting confusion to an issue or domain, but there was actually very little on the meaning of confusion itself. Our experience led us to acknowledge that confusion can generate a waste of time, effort, and resources with varying intensity. Kerridge (1996) described confusion as "one of the five diseases of organizations: 1. confusion, 2. conflict, 3. complexity, 4. chaos, and 5. cost", which frustrate the good work of managers and workers alike, but only management can cure them. In this context, there are two types of confusion: false certainty, when people do the wrong thing with the best of intentions; and uncertainty, when no one knows what to do. Moreover, several types of conflict exist, including conflict over integrity, conflict over short-term and long-term interests, personal conflicts, and conflict over local needs and system-wide needs. If confusion, conflict, complexity, and chaos can be reduced, costs will fall for business.

These initial confusions can potentially generate anything from mundane and mild implications to severe and dramatic business impacts with a more, or less, serious time criticality (Sikdar, 2011). Burtles (2015) described business impacts as disruptive scenarios, which produce losses in many areas, including access to facilities, people (clients, employees unable/unwilling...), supplies (shortages), communication (ineffective, corrupted), functions and roles (equipment out of service), and data (unable to access, tainted). These all encompass operations and can lead to financial and reputational risks (Hall, 2015). Determining confusion's influence on business led us to organize our initial thinking on the challenges and benefits of confusion. The challenges, we quickly agreed, focused on losses, such as resources, money, time, ability to engage, efforts, opportunities, collaboration, and energy to act. The benefits include:

- (a) it forces change methods, ideas, and conceptions to grow;
- (b) it helps us to become less anxious about a situation;
- (c) it facilitates improving our management of uncertainty in specific contexts;
- (d) it reduces the panic-button reflex;
- (e) it fosters intellectual weightlifting with learning experiences; and
- (f) it represents a confidence-building opportunity.

Along these lines, Row (2005) proposed the following recommendations to leverage confusion as a learning opportunity: (a) embrace your confusion; (b) assert your need to make sense; (c) structure the interaction; (d) listen reflectively and learn; e) openly process your effort to make sense; and (f) identify and interpret sources of information. This early review triggered an interest in exploring the subject of confusion. After initial conversations and reflections on business confusions with a handful of senior executives and partners in Europe, the United States, and Japan, we propose a set of potential tools to help manage it.

3. Prospective Tools

The following tools are the fruit of exploratory, qualitative, and convenient conversations with business leaders, consultants, and academics that led to an early theory-building stage (Colquitt & Zapata-Phelan, 2007; Nevins, 2021). Although they are the fruit of a consensus by the authors, they are considered early sketches requiring further research towards validity and reliability. Berg (2016) reminded us when individuals try to generate novel ideas, they engage in *divergent* thinking, which involves searching for novel associations, combinations, or perspectives that may be useful (Guilford, 1967). When individuals evaluate ideas, they engage in *convergent* thinking, which involves applying criteria, standards, and logics based on their prior knowledge and experience (Cropley, 2006). We have tried to combine these two dynamics in the construction of each tool.

3.1 A What is Confusion to You? Conversation

The first tool is a summary of early findings from 20+ qualitative convenient conversations we had with French, United States, and Japanese nationals in the business and academic worlds. Using coding techniques borrowed from Grounded Theory (Glaser & Strauss, 1967), we offer the following summaries of these conversations:

- Expressed surprise: an American medical anthropologist's first reaction was "hum..." and a 10-second silence before an "interesting";
- Commented they generally do not think about the concept of confusion;
- Asked why we wanted to have a conversation on confusion and on its purpose;
- Paused, remained silent, and asked for and took time to think;
- Asked for examples and requested a context;

- Found it hard to come up with their own examples and gave generic descriptions like "there is confusion in communication, you do not have all the information...";
- Referred to a French cultural belief and expression: "what is well conceived is expressed clearly and words to describe it come easily." However, it appears in
- Japan that the initial reaction to confusion is "no reaction" and the adoption of a mask of no emotion (kabuki);
- Acknowledged it was an issue;
- Did not question the potential negative impact of confusion in business;
- Commented "we're not very good at that";
- Expressed a dislike of "confusion";
- Highlighted (by one) the importance of considering emotions to sense confusion;
- Raised the importance of acknowledging the recognition of one's own confusion;
- Stated "I'm not a psychologist";
- Demonstrated confusion about confusion;
- Asked, "do you mean the person has lost their way?";
- Connected confusion to a negative feeling and to illness;
- Accused others of being confused;
- Qualified others as being confused when intending to state they are wrong;
- Stated this is not a topic we often address;
- Commented it was taking one thing for something else;
- Associated the notions of approximation and risk;
- Raised the point of being aware of confusion;
- Asked how "managing confusion" is initiated;
- Stated it was the uncomfortable feeling of being jammed, scrambled, losing meaning, hesitating, wondering;
- Highlighted the necessity to acknowledge the confusion;

- Stated that emotions blur clarity;
- Associated confusion with being embarrassed;
- Highlighted hesitation in the course of action;
- Acknowledged it impacts all at all levels; and
- Stated it is a loss of common sense.

After several reviews of these initial findings using coding techniques borrowed from Glaser and Strauss (1967), we developed a consensus on confusion:

- 1. It appears confusion is not a topic people dwell on much;
- 2. Respondents demonstrated that finding examples is a challenge;
- 3. There is no question of the negative impacts associated with confusion in general and in business;
- 4. Confusion is disliked;
- 5. A limited ability to manage confusion was acknowledged;
- 6. Confusion is associated with negative feelings and emotions, such as embarrassment or being "jammed," hesitating, or being wrong;
- 7. Being aware and acknowledging confusion is an issue; and
- 8. It prompts various reactions (silence, request for time, no reaction, attempts to define, etc.).

When discussing these eight findings, we quickly concluded that we would be very comfortable publishing them on the front pages of news media with a title such as *Confusedly Clear? Or clearly confused?* (see Nevins 2021).

3.2. An Early List of Confusions

In this tool, we present a summary of and comments on a list of 15 "Top-of-the-mind Main Street" confusions related to business. This tool prompts thinking on current confusions and calls for personal attention to them. It is part of a larger exploration leading to clearly identifying 100+ confusions:

- 1. Crisis management vs crisis communication management: This confusion places efforts on speaking about crisis management versus implementing necessary measures to address the crisis. Both are required and should be addressed rigorously. It is our outsider observation on how the U.S. government did not manage the 2020 COVID-19 pandemic nationally in this way appears to illustrate the point. To a large extent, this tool can therefore also be applied to politics;
- 2. Demand vs need: This relates to a request associated with a preconceived symptom versus a demand that relies upon clearly identified causes. It is like a person with a toothache going to the dentist and asking for pain medication. For the person, it is a need; for the dentist it is a symptom of a wider problem because after observation and diagnosis (understanding why), the real need might be to treat a cavity;
- 3. Sales turnover vs benefits: This is a typical confusion that is due to lack of understanding of financial and accounting principles. Typically thinking revenue equals profits without considering spending to generate revenue is one such confusion. An entrepreneur who sees the company's sales as revenue would reveal this practice;
- 4. Busyness vs business: This refers to the confusion of focusing on action for its own sake versus action with an effect. This focuses on activities that generate value versus simple activities. It also highlights that we should not confuse focus on effectiveness (doing the right things) with focus on efficiency (doing them properly);
- Nice to do vs need to do: This is a confusion exerting effort on activities we find pleasing to accomplish versus activities required for progress;

- 6. Correlation and causality: Similarity does not equal influence. In the summer, sunburns and ice cream or soft drink consumption increase. These two occurrences are correlated, but there is no causal link;
- Facts and opinions: This consists of associating an opinion with reality without filtering it through rigorous validity and reliability checks;
- 8. Knowledge vs knowledge usage: This confusion relates to having access to data or information versus making relevant use of data. Contrary to ignorance, which is not having "all the elements of the puzzle," ineptitude occurs when one has the elements but does not apply them correctly, often through negligence (Gawande, 2009);
- 9. Normality of our bias vs truth: This refers to considering our prism as the truth and not questioning our assumptions. Consider avoidance strategies, rejections, conflicts, witnessing, and mockeries as early signs;
- 10. Do your job versus make this work: This confusion arises when workers uncritically follow their job descriptions versus proactively doing what is necessary beyond their job description. Fox and Rouault (2003) highlighted that job descriptions were originally developed in the 19th century to guide unqualified people in their jobs;
- 11. Past success as best predictor of future success: This assumes past success is the best assurance for foreseeing the future and relies upon factors that were meaningful in the past as timeless essentials;
- 12. Not seeing the forest for the trees: This confusion occurs when attempting to address a specific issue without considering its bigger context and risking improving one area at the detriment of a general interest;
- 13. Weather and climate: Weather describes actual local atmospheric conditions over short periods of time. Climate describes atmospheric behavior averaged over long time periods (years and even centuries) across large

geographic areas and is a composite of weather conditions averaged over many years (Schweitzer, 2011);

- 14. Absolute performance vs relative performance: this consists of keeping a big picture perspective between one result and a comparable result; and
- 15. Speed and hastiness: This includes effectively accomplishing a task in optimal time rather than quickly executing one to the detriment of quality; haste makes waste!

3.3. The TAPE Cycle

This tool describes a confusion management cycle we call the TAPE (Tag-Act-Perform-Expand) that proposes behaviors to manage and leverage confusion (Figure 2). This framework has been the fruit of monthly exchanges between the authors and relies on four levels: context, stage, behavioral steps, and expected outcome:

- 1. The first level is **context** related and resides inside the cycle (see Figure 2, starting in the upper right quadrant) and describes a general storyline: once upon a time, someone was confused and in Chaos and decided to engage in a Path leading eventually to an Achievement, which prompted a new Venture, which then leads to Chaos;
- 2. The second level is the **stage** and refers to the key general words that connect to the context and are positioned North, South, East, and West: Confusion is associated with Chaos; ACTION with Path, MASTERY with Achievement, and IMAGINATION with new Venture;
- The third level describes the behavioral steps, marked with an arrow, needed to be taken: Chaos > Confusion > TAG; Path > Action > ACT; Achievement > Mastery > PERFORM; and Venture > Imagination > EXPAND;

4. The fourth level describes the key expected outcomes generated from the behavioral steps. They are not described in the TAPE cycle, they are described afterwards along with the behavioral steps. In Chaos > Confusion > TAG, thus the incumbent expresses an early solid vision of the issue at stake. In Path > Action > ACT, early initiatives to address the confusion are demonstrated. In Achievement > Mastery > PERFORM, signifying mastery in one's own "art" and eagerness for more, and in Venture > Imagination > EXPAND, whereby the incumbent wonders "what's next?" and heads to a new confusion.

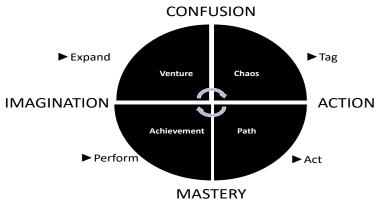


Figure 1. The TAPE cycle

4. Behavioral steps and associated expected outcomes

4.1. The TAGging steps

Whoever we are, wherever we are, and whatever we do, we always start with a confused view of our surroundings. Our first general strategy is to understand enough to survive, enhance our

Confusion: An Exploratory Conversation on Meaning and Tools to Address Confusion at Work

control, and reduce the fear of our surroundings. In a personal conversation (Balard, 2020), it was argued that the message of confusion is "I know that I don't know." Confusion is a feeling close to an emotion, and leveraging the work of Salovey, Mayer, and Caruso (2002) on emotional intelligence, we consider that the first stage is grounded in perception and expression. Therefore, our first skill is to TAG the confusion in the situation, and to do so, the behavior requires naming three fundamental things:

- 1. Name the emotion to acknowledge how you "feel" in the beginning of the confusion;
- 2. Name the confusion to understand its nature (e.g., I do not know what to think [idea/message] and/or how to act [steps/communication]); and
- 3. Name the assumptions that cannot be deduced any further from the situation that form the basic truth about the situation (Aristotle's first principles).

The general foreseen outcome for the Tagging phase is that the incumbent expresses an early solid vision of the issue at stake (Figure 3).



Figure 2. The TAGging steps

4.2. The ACTing steps

After the TAG stage, the intent is to make inroads into the issue through progress in managing the confusion but not seeking perfection. When considering ACTing, it is key to remember Darwin's point: "it is not the strongest of the species that survives, nor the most intelligent; it is the one that is most adaptable to change". Thus, the second skill is to ACT to start addressing the confusion. ACTing is grounded in the **BAR** framework developed by Foss and Klein (2020). It is a process in which an entrepreneur believes he can bring about a particular future (**B**elief), then acts in conditions of uncertainty (**A**ction) and reviews the outcomes towards the anticipated desired future (**R**esults). The ACT behaviors are as follows:

- 1. Set your path to formulate an action with an intention;
- 2. Act to accomplish the action steps that will address the intention; and
- 3. Obtain early results to observe initial progress towards the intention.

The general foreseen outcome for the ACTing phase is that the incumbent devises an early initiative to address the confusion (Figure 4).



Figure 3. The ACTing steps

4.3. The PERFORM steps

At this stage, we become more effective and efficient in our various activities towards mastery. This helps us optimize our contributions, reduce our risks and fears, and maximally take control; this provides bandwidth to focus on what's next. When we perform, we are effective and comfortable. Performing leads us to navigate what **Csikszentmihalyi (1990) described** as flow: the psychology of optimal experience where our best experiences occur as we strive to address more and more complex problems and navigate between boredom and anxiety. The PERFORM behaviors are as follows:

- **1.** Deliver results that can be defined as strong levels of performance;
- **2.** Sustain the effort to ensure performance consistency over time; and
- **3.** Reach Flow to feel enjoyment, comfort, and a desire for more.
- **4.** The general outcome of the PERFORM phase is one demonstrates mastery in one's own "art" (Rouault, Pardo, & Drugmand, 2020) and has an eagerness for more (Figure 5).



Figure 4. The PERFORM steps

4.4. The EXPAND steps

The EXPAND stage focuses on imagining and creating by expanding and exploring the unknown with its associated set of new confusions. This pattern is repeated constantly whether we talk about the U.S. elections, environmental protection, the Italian Renaissance, the COVID-19 responses, children's education, care for the elderly, or our respective jobs.... Towards this, Willkomm (2019) encouraged us to change our thought process, force ourselves to take risks, encourage others to be open minded, and embrace learning to start adapting. Einstein highlighted that imagination is more important than knowledge. Robinson (2017) argued that to be creative, you must do something. Creativity is very practical. I think of it as applied imagination, thus putting your imagination to work. To do so, we observe the following sequence: formulate the question; incubate; reach a Eureka moment; and act towards producing new "solutions," whatever they may be. The EXPAND behaviors are as follows:

- 1. Ideate towards findings new areas of "improvement";
- 2. Integrate to marry the existing and the new meaningfully; and
- 3. Outperform to reach new contribution heights.

The general outcome of the EXPAND phase lies in "what's next" and a new confusion (Figure 6).



Figure 5. The EXPAND steps

5. Discussion

Confusion is thus the starting and ending point of the cycle, whatever it may be. And it is the beginning of understanding. We can empirically observe that the three phases that follow the TAG phase appear to align with the roadmap for innovation leadership developed by Das (2012) who suggested that we demonstrate action (ACT), build connections (PERFORM), and invest in the future (EXPAND). We hear many comments about disliking confusion and not being "very good" at managing confusion. But being confused is not negative; it is an essential element of being engaged because the feeling of confusion in a situation is a trigger to a coming initiative that will affect the situation's course. While we suspect this is associated with losing face or freezing or acknowledging weaknesses, the feeling is in fact a strong sign that there are forthcoming actions to take. A confused situation to one person may be very clear to someone else. We see this, for example, in the conversation about and exposure to cultural differences. To more than 120 million people, Japan is home, but it is a very confusing place for first-time visitors from other places. Our paths and experiences demonstrate our abilities to manage these situational and contextual confusions, and is expected in some of our surroundings, but, for all of us, there is always room for more confusion, action, performance, and expansion.

According to Sadhguru (2016), "the nature of the mind is confusion, that's its beauty.... It's always confused because it can't figure anything, but it can gather everything and mull over it endlessly. You have to learn to use the confusion to your benefit.... If your mind is not confused, that means it's not constantly receiving and when you're perceiving more and more information, it is always confused because it is always receiving much more than it can ever process". We further the exploration of confusion by discussing additional supporting tools inspired from the 5 W's framework of inquiry (who, what, when, where, and why) (Radom & Gammons, 2014) and the H4W model (Verschure, Pennartz, & Pezzulo, 2014) that states the central problems goal-directed animals must solve are: what do I need and why; where can this be obtained; and how do I get it? We have connected them to a set of questions around Why, What, On What, Where, and How. To engage in this exploratory reflection on the instrumentalization of confusion management tools, we use creative frameworks and are able to develop an understanding of users' reactions to these frameworks when evaluating their usefulness in everyday life. To address this, we discuss a Confusion Matrix and a Confusion-Clarity Index.

5.1. Reasons for a confusion tool

We have been wondering about the reasons for confusion, and our conversation has led to initial observations on the rationales for confusion and the following:

- 1. Lack of awareness, knowledge, references, and exposure to an issue;
- 2. Lack of skills, comfort, and habits when addressing an issue;
- 3. Lack of management of one's own emotions in addressing an issue;
- 4. Lack of purpose and locus of control when addressing an issue;
- 5. Lack of precision in labeling an issue;
- 6. Lack of valid and reliable reasoning, such as employing fallacies (reasoning that comes to a conclusion without the evidence to support it);
- Lack of knowledge we have about ourselves and others have about us, as for example described in the JoHari Window (Open, Blind, Hidden, Unknown) (Clayton, 2008);
- 8. Lack of understanding of the intentions of a person or group; and

9. Lack of acknowledgement of one's own confusion.

These empirical reasons represent further avenues to consider when addressing confusion and facilitating a why review.

5.2. A Confusion-Clarity index tool

Mixing the two antonyms of confusion and clarity, we propose a scale describing the continuum between Confusion (on the left side) and Clarity (on the right side) through an illustration of explicit behaviors This is meant to encourage self-questioning about one's own levels of confusion or clarity on a dedicated subject and facilitate the use of the perceptual/behavioral matrix described earlier. It helps address "Where do I stand"? The procedure is to ask yourself (or a respondent) about your comfort level on the scale below (1 = very low to 5 = very high):

•	It happens th entourage te and think wi confusion. People often clarify my th action. I do not qua nature of con understandin both.	lls me I act th ask me to ninking and lify the			co in th Pe m ar co as un	onsist sight ough cople y wo re "ex rapid onfus ssocia	tourage ently seeks my s for clear ts and actions. often tell me rds and actions cactly right." ly identify if sion is ted with tanding, acting t.
1		2	3	4			5

5.3. The Confusion Matrix tool

Leveraging Kapferer's (1995) conversation on perceptual/behavioral confusion, we formulate a high/low index for each dimension and explore what comes immediately to mind. We

would argue that a high perceptual and high behavioral confusion will lead to seriously and clearly articulating and formulating the relevant questions to the EXPAND tool that captures the essential issue at stake and its implications; the "spot on" formulation of your big question. Low perceptual and high behavioral confusion would encourage the consideration of the PERFORM tool and the mission (reason for being) and vision (destination to reach), and all matters associated to governance and situation management; the best description of your ambition. A high perceptual and low behavioral confusion outcome would require the ACT to be clarified with regards to execution of situation and role; the description of the skills at work. A low perceptual and low behavioral confusion result would signify starting to find an early and initial TAG towards developing a question, a purpose, or a practice; representing the first step of the journey. We foresee that this initial observation could help the user who is faced with a new problem to leverage the confusion matrix to develop a relevant initiative strategy because it brings light to "What to focus on".

Formulation and execution are two of the well-recognized strong building blocks of a strategy (Simerson, 2011), and we empirically observe TAG and EXPAND could fall in the category of formulation and ACT and PERFORM in the category of execution (Figure 7).

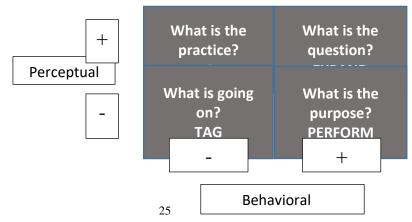


Figure 6. The Confusion Matrix tool

As a summary of the tool review, we suggest using the following approach to tool application, as shown in Table 1.

Table 1. Applying tools to address confusion

When you want to	Use this tool		
• Reflect on confusion	• What is confusion to you?		
• Get examples of confusion	Early list		
• Explore the rationale for confusion	Reasons for confusion		
• Assess your level of confusion	Confusion-clarity index		
• Review the nature of confusion	Confusion matrix		
Know how to address confusion	• TAPE cycle		

These tools are the fruits of exploratory, qualitative, and convenient conversations with business leaders, consultants, and academics that led to an early theory-building stage (Colquitt & Zapata-Phelan, 2007). At this stage, we consider we are in the ACT stage of the TAPE cycle and are seeking to engage in qualitative and quantitative exploratory observations using the tools to address confusion. Our initial attempt is to question a small sample of respondents on what confusion means to them. We intend to randomly gather information in Japan, the United States, and France for convenience reasons with a small sample of 7+/-2 participants in each country (Miller, 1956). We will seek validity, reliability, and

saturation to build consensus on a limited set of observations from the respondents, focusing on Pareto's law (Persky, 1992) to build the 7+/-2 model. We intend to use coding techniques borrowed from Grounded Theory approaches to empirical research (Goulding, 2005) and develop a 5-level Likert scale that describes comfort level (1 = very low to 5 = very high). We will further our qualitative exploration of the tools presented earlier with possible users, and we intend to leverage all the qualitative methods available including interviews, focus groups, observation, grounded theory, and thick description, to name a few. We also seek to develop a quantitative exploration of the TAPE cycle and are currently designing a questionnaire to achieve this.

5.4. Analogy from the field of Mathematics

In mathematics, the *name* of a branch of mathematics developed in the late 20^{th} century, 'Chaos Theory', appears oxymoronic or paradoxical as first glance. If a '*theory*' exists to explain behavior, then that, in and of itself, suggests that the behavior is not chaotic.

Chaos in this mathematical field is behavior which because it is not periodic, appears unpredictable, and elicits confusion to the viewer. For our purposes, in this paper, this paradox can be highly instructive for our pursuit of a strategy for dealing with confusion. We have described a methodology to explore confusion and numerous tools to help manage and clear confusion. The assumption is that there are ways to handle confusion and that there are solutions to the dilemma. An essential step is that of action (ACT). When confronting confusion in a business landscape, we have presented tools to find our way to a process that overcomes the confusion AND leads to a profitable/beneficial clearing in the fog. Entrepreneurs will inevitably find the process difficult and it is essential that we have confidence that such a solution is possible. As a Physics professor once said, "Physics is easy, once you understand it". During the ACT phase, we need patience and poise, paired with certainty that within the chaos there is a solution and that once it is

Confusion: An Exploratory Conversation on Meaning and Tools to Address Confusion at Work

found, it will be "easy". This sureness in the fact that a solution exists will buoy the ACT phase where the entrepreneur is swimming in a miasma of confusion.

In Chaos Theory, the Feigenbaum constant provides an interesting example. Feigenbaum found that the limiting ratio of each bifurcation interval to the next between every period doubling, of a one-parameter map was approximately 4.669. The discovery of patterns and even beauty in chaos, like the development of Steve Job's personal computer, should give inspiration to any entrepreneur, who is faced with the task of giving birth to a new product or a solution to a business problem. Similarly, our TAPE model should provide some structure and some planks by which to navigate these difficulties.

5.5 Academic and Business Implications

In initiating this conversation that relies on solid qualitative and quantitative exploration to challenge our empirical findings, we have our eyes on its academic implications. The business implications reflect the understanding that confusion affects everyone at work, and therefore, further study is critical to managing the myriad situations workers face. We believe, at this stage, that confusion is part of a bigger issue that relates to personal information management.

6. Conclusions

In the popular mind confusion appears to be associated with negative effects on general life and business activities. Our initial investigation challenges this characterization and suggests that this is not its specific domain of focus. By revealing our alternative we gain a formidable opportunity to expand and encourage learning. Our early inroads into the associated tools and our modeling of the TAPE cycle encourages us to expand our initial exploration and further our understanding through additional literature review and qualitative and qualitative examination. In the uncertain world we all operate in, often described as VUCA (Volatile, Uncertain, Complex, Ambiguous) as defined originally by the U.S. War College (Cousins, 2018), we foresee confusion as a possible springboard for enhanced effectiveness.

References

- American Psychological Association. (n.d.). Confusion. In American Psychological Association's online dictionary. Retrieved from https://dictionary.apa.org/confusion
- Arnold, E. C. (1923). Confusion. *Columbia Law Review*, 23(3), 235–246.
- Babian, H., & Kessler, M. (1956). Economic Clichés: Commonplace confusion. *Challenge*, 5(2), 68–71.
- Berg, J. M. (2016). Balancing on the creative highwire: Forecasting the success of novel ideas in organizations. *Administrative Science Quarterly*, *61*(3), 433–468.
- Bertuca, T. (2014). Army sending tanks to Eastern Europe as tensions escalate with Russia. *Inside the Pentagon*, *30*(36), 11–12.
- Bigelow, C. L. (1948). Elements of confusion in newspaper readership study. *Journal of Marketing*, *12*(3), 337–347.
- Borna, S., & White, G. (2003). "Sex" and "Gender": Two confused and confusing concepts in the "Women Corporate" literature. *Journal of Business Ethics*, 47(2), 89–99.

Confusion: An Exploratory Conversation on Meaning and Tools to Address Confusion at Work

- Burtles, J. (2015). The hexagon hypothesis: Six disruptive scenarios. *Journal of Business Continuity & Emergency Planning*, 9(1), 60–69.
- Cambridge Dictionary. (n.d.). Clarity. In *Cambridge dictionary's online dictionary*. Retrieved from https://dictionary.cambridge.org/fr/dictionnaire/anglais/clarity
- Cambridge Dictionary. (n.d.). Confusion. In *Cambridge dictionary's online dictionary*. Retrieved from https://dictionary.cambridge.org/fr/dictionnaire/anglais/confusi on
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: Harper Perennial.
- Clayton, M. (2008). Super models. Training Journal, May, 67.
- Colquitt, A., & Zapata-Phela, C. P. (2007). Trends in theory building and theory testing: A five-decade study of the Academy of Management Journal. *Academy of Management Journal*, *50*(6), 1281–1303.
- Cousins, B. (2018). Design thinking: Organizational learning in VUCA environments. *Academy of Strategic Management Journal*, 17(2), 1–18.
- Cropley, A. (2006). In praise of convergent thinking. *Creativity Research Journal*, 18(3), 391–404.
- Das, K. (2012). Never innovate alone: How to collaborate for organizational impact. *Design Management Review*, 23(1), 30– 37.

- Farooqi, N., Kouyialis, A. T., Brodbelt, A. (2006). First things first. *Lancet*, 368(9535), 617.
- Fayn, K., Silvia, P. J., Dejonckheere, E., Verdonck, S., & Kuppens, P. (2019). Confused or curious? Openness/intellect predicts more positive interest-confusion relations. *Journal of Personality and Social Psychology: Personality Processes and Individual Differences*, 117(5), 1016–1033.
- Foss, N. J., & Klein, P. G. (2020). Entrepreneurial opportunities: Who needs them? *Academy of Management Perspectives*, *34*(3), 366–377.
- Fox, D., & Roualt, F. (2003). les 65 Memos De L'efficacite Professionnelle Construisez Votre. Paris: Editions AFNOR.
- Gawande, A. (2009). *The checklist manifesto: How to get things right*. New York: Metropolitan Books.
- Guilford, J. P. (1967). *The nature of human intelligence*. New York: McGraw-Hill.
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of Grounded Theory: Strategies for qualitative research.* New York: Alfine.
- Goulding, C. (2005). Grounded theory, ethnography, and phenomenology: A comparative analysis of three qualitative strategies for marketing research. *European Journal of Marketing*, 39(3/4), 294–308.
- Gross, S. R., Holtz, R., & Miller, N. (1995). Attitude certainty. In R. E. Petty & J. A.
- Krosnick (Eds.), Attitude strength: Antecedents and consequences (vol. 4, pp. 215–245). New York: Lawrence Erlbaum

Associates, Ohio State University series on attitudes and persuasion.

- Hall, T. L. (2015). Business impact analysis and risk assessment can help you prepare. *Bankingsolutions*. Retrieved from http://www.bankingsmartsolutions.com/2015/03/businessimpact-analysis-and-risk-assessment-can-help-you-prepare-2/
- Heywood, S., DeSmet, A., & Webb, A. (2014, September 1). Tom Peters on leading the 21st-century organization. *McKinsey Quarterly*. Retrieved from https://www.mckinsey.com/businessfunctions/organization/our-insights/tom-peters-on-leading-the-21st-century-organization#
- Imagination Matters. (2017, November 3). Sir Ken Robinson says imagination is what makes us human. Retrieved from <u>https://www.imaginationmatters.org/index.php/2017/11/03/sir-ken-robinson-imagination-makes-us-human/</u>
- Kang, S. P. (2015). Change management: Term confusion and new classification. *Performance Improvement*, *54*(3), 26–32.
- Kapferer, J. N. (1995). Brand confusion: Empirical study of a legal concept. *Psychology & Marketing*, *12*(6), 551–568.
- Kerridge, D. (1996). Dr. Deming's cure for a sick system. <u>The</u> Journal for Quality and Participation, 19(7), 24–27.
- Lefebvre, E., & Letiche, H. (1999). Managing complexity from chaos: Uncertainty, knowledge, and skills. *Emergence*, 1(3), 7–15.

- Lewis, M. (1990). The development of intentionality and the role of consciousness *Psychology Inquiry*, 1(3) 231–247.
- Lisinskaité, I. (2011) Application of protection against unfair competition in the presence of the likelihood of confusion of trademarks and company names. *Issues of Business and Law, 3*, 134–144.
- Lombroso, T. (2015). Sometimes confusion is a good thing. *NPR Cosmos* & *Culture*. Retrieved from https://www.npr.org/sections/13.7/2015/12/14/459651340/som etimes-confusion-is-a-good-thing
- McElhaney, J. W. (1988). The risk of confusion. *ABA Journal*, 74(1), 100–101.
- McGrath, S. K., & Whitty, J. (2013). Redefining governance: From confusion to certainty and clarity. *International Journal of Managing Projects in Business*, 8(4), 755–787.
- Markkula, A., & Moisander, J. (2012). Discursive confusion over sustainable consumption: A discursive perspective on the perplexity of marketplace knowledge. *Journal of Consumer Policy*, 35(1), 105–125.
- Markman, A. (2010, July 1). Ulterior motives: Just don't do it; Is it better to get up and act or do nothing? *Psychology Today*, *July/August*, 52–53.
- Mastaglio, L. (2020, March 30/April 6). Confronting climate confusion. *Engineering News-Record*, 41–43. Retrieved from http://digital.bnpmedia.com/publication/index.php?m=39147&i =656378&p=42

- Merriam-Webster. (n.d.). Clarity. In *Merriam-Webster's online dictionary*. Retrieved from https://www.merriamwebster.com/dictionary/clarity
- Merriam-Webster. (n.d.). Confusion. In *Merriam-Webster's online dictionary*. Retrieved from https://www.merriamwebster.com/dictionary/confusion
- Miller, G. A. (1956). The magical number seven, plus or minus two: Some limits on our capacity for processing information. *The Psychological Review*, 63(2), 81–97.
- Mini, T. C., Christopher, A., & Janetius, S. T. (2020). Magnitude of career confusion among college students in India: An empirical report. *The International Journal of Indian Psychology*, 8(2), 962–967.
- Minkov, M., & Hofstede, G. (2011). The evolution of Hofstede's doctrine. *Cross Cultural Management: An International Journal*, 18(1), 10–20.
- Mitchell, V.-W., & Walsh, G. (2005). Towards a conceptual framework of E-confusion. In K. Seiders & G. B. Voss (Eds.), AMA winter educators' conference proceedings 2005, Marketing theory and applications (vol. 16, pp. 44–45). Retrieved from http://toc.proceedings.com/00076webtoc.pdf
- Mitchell, V. W., & Papavassiliou, V. (1999). Marketing causes and implications of consumer confusion. *Journal of Product and Brand Management*, 8(4), 319–339.
- Moneymarketing. (2009, January 15). Sense of confusion. Retrievable at https://www.moneymarketing.co.uk/opinion/sense-ofconfusion/

- Nevins, M. (2021). Confusedly Clear? Or Clearly Confused? *Forbes Magazine*, March 22.
- Oxford University Press. (n.d.). Clarity. In Oxford's learner's online dictionary. Retrieved from https://www.oxfordlearnersdictionaries.com/definition/english/ clarity?q=clarity
- Oxford University Press. (n.d.). Confusion. In Oxford's learner's online dictionary. Retrieved from https://www.oxfordlearnersdictionaries.com/definition/english/ confusion
- Pauli, W. J. (1960). Confusion and problem solving. *The Clearing House: A Journal of Educational Strategies, Issues, and Ideas*, 35(2), 79–82.
- Persky, J. (1992). <u>Pareto's</u> law. Journal of Economic Perspectives, 6(2), 181–192.
- Plaut, S. (2006). "I just don't get it": Teachers' and students' conceptions of confusion and implications for teaching and learning in the high school English classroom. *Curriculum Inquiry*, *36*(4), 391–421.
- Radom, R., & Gammons, R. W. (2014). Teaching information evaluation with the five Ws: An elementary method, an instructional scaffold, and the effect on student recall and application. *Reference & User Services Quarterly*, 53(4), 334– 347.
- Rantanen, J. (2017). Feeling confused at your work? This is why confusion is GOOD for you! Retrieved from https://www.jarkkorantanen.com/feeling-confused-at-yourwork-this-is-why-confusion-is-good-for-you/

- Reeves, M., Levin, S., Fink, T., & Levina, A. (2020). Taming complexity. *Harvard Business Review*, *January-February*, 113–121.
- Rehman, A. U., & Lioa, X. (2018). A novel robust dual diffusion/confusion encryption technique for color image based on Chaos, DNA and SHA-2. *Multimedia Tools and Applications*, 78, 2105-2133.
- Ritchie-Dunham, J. (2005). The four truths of clarity. *Reflections*, 6(6/7), vi–vii.
- Rochat, P. (2003). Five levels of self-awareness as they unfold early in life. *Consciousness and Cognition*, *12*(4), 717–731.
- Rouault, F., Pardo, P., & Drugmand, C. (2020). L'engagement professionnel: Un référentiel de performance [Professional engagement: A performance benchmark]. Paris: Editions AFNOR.
- Row, H. (2005). Confusion at work. *Fast Company*. Retrieved from https://www.fastcompany.com/668620/confusion-work
- Roy-Charland, A., Perron, M., Beaudry, O., & Eady, K. (2014). Confusion of fear and surprise: A test of the perceptualattentional limitation hypothesis with eye movement monitoring. *Cognition and Emotion*, 28(7), 1214–1222.
- Sadhguru, I. (2016). The mind can only be confused. Tamil Nadu, India: Isha Foundation. Retrieved from <u>https://isha.sadhguru.org/global/en/wisdom/video/the-mind-</u> <u>can-only-be-confused</u>

- Salovey, P. Mayer, J. D., & Caruso, D. (2002). The positive psychology of emotional intelligence. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook on positive psychology* (vol. 336, pp. 159–171). New York, NY: Oxford University Press.
- Schulz, J. D. (2020). 2020 cross-border update: Even more confusion ahead. *Logistics Management*. Retrieved from https://www.logisticsmgmt.com/article/2020_cross_border_up date_even_more_confusion_ahead
- Schweitzer, J. (2011). Confusing weather and climate: The false debate about global warming. *Huffpost*. Retrieved from. <u>https://www.huffpost.com/entry/confusing-weather-and-climate</u>
- ScienceDirect. (2011). Plan-Do-Check-Act. In *Managing your library and its quality*. Retrieved from https://www.sciencedirect.com/topics/computer-science/plando-check-act
- Sertoglu, A. E., & Kavak, B. (2017). A more comprehensive view of consumer confusion: Scale development. *Journal of International Consumer Marketing*, 29(4), 265–276.
- Shiu, J. Y. (2017). Investigating consumer confusion in the retailing context: The causes and outcomes. *Total Quality Management*, 28(7), 746–764.
- Sikdar, P. (2011). Alternate approach to business impact analysis. *Information Security Journal: A Global Perspective*, 20(3), 128–134.
- Silvia, P. J. (2009). Looking past pleasure: Anger, confusion, disgust, pride, surprise, and other unusual aesthetic emotions. *Psychology of Aesthetics, Creativity, and the Arts, 3*(1), 48–51.

- Simerson, B. K. (2011). *Strategic planning: A practical guide to strategy formulation and execution*. Santa Barbara, CA: Praeger.
- Singh, H., & Singh, A. (2002). Principles of complexity and chaos theory in project execution: A new approach to management. *Journal of Cost Engineering*, 44(12), 23–32.
- Stecker, M. J. (2016). Awash in a sea of confusion: Benefit corporations, social enterprise, and the fear of "greenwashing". *Journal Of Economic Issues*, L(2), 373–381.
- Takenaka, H. (2020, June 26). Japan's structural problem exposed by Covid-19 crisis. *The Japan Times*. Retrieved from https://www.japantimes.co.jp/opinion/2020/06/26/commentary/ japan-commentary/japans-structural-problems-exposed-covid-19-crisis/
- Turner, R. (1940). Culture, change and confusion. *The Public Opinion Quarterly*, 4(4), 579–600.
- Verschure, P. F. M. J., Pennartz, C. M. A., & Pezzulo, G. (2014). The why, what, where, when and how of goal directed choice: Neuronal and computational principles. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 369(1655), article ID: 20130483. http://dx.doi.org/10.1098/rstb.2013.0483
- Willkomm, A. C. (2019). 4 ways to boost your adaptability skills. Drexel University Goodwin College of Professional Studies. Retrieved from https://drexel.edu/goodwin/professionalstudies-blog/overview/2019/September/4-ways-to-boost-youradaptability-skills/

Zeng, G. (2020). On the confusion matrix in credit scoring and its analytical properties. *Communications in Statistics: Theory & Methods*, 49(9), 2080–2093.

Confusion: An Exploratory Conversation on Meaning and Tools to Address Confusion at Work