

# Cognitive and Behavioral Patterns of Perception and Action

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*The Profiles of Activities and Attitudes Toward Healthcare (PATH) model is one among many providing ample evidence that the way adults view their environment and how they behave towards it does not exist in patterns completely unique to each individual. The PATH model shows that in a health care context there are a limited number of major underlying patterns of perception and action shared by many adults, and that these major patterns are shaping and accounting for much of the health care trends we see. Because these patterns currently remain invisible and unacknowledged by modern health care their impact is unfettered. Such patterns as represented by each of the nine types identified by the PATH model are the evidence supporting the existence of cognitive patterns of perception and behavioral patterns of action.*

The cognitive and behavioral patterns of perception and action address the close interplay between how we think and what we do. The dynamics represented by the cognitive and behavioral patterns of perception and actions are powerful factors shaping how we react to the environment, how we filter input, and how we prioritize and decide on actions. The factors and dynamics shaping the cognitive and behavioral patterns of perception and action are complex and determined by the interaction of many physical, psychological and psycho-social factors.

The cognitive pattern of perception (CPP) and the behavioral pattern of action (BPA) each have its own special realm of manifestation. The cognitive pattern of perception is related to habitual ways of thinking and thought. The behavioral pattern of action represents habitual actions and patterns of behavior.

## The Stages of Change

For those familiar with the six stages of change<sup>1</sup> the CPP and BPA can be associated with each stage of change as follows:

Precontemplation -----CPP  
Contemplation -----CPP  
Preparation -----BPA  
Action -----BPA  
Maintenance-----BPA/CPP  
Termination -----CPP/BPA

At the precontemplation stage, interventions focus on the patterns of perception and thinking that support any given patterns of behavior. The interventions focus on “consciousness-raising” that may include a focus on examining deep unconscious motivations for the behaviors, or simple imparting of information. Here the focus is on expanding a person’s CPP by offering greater insight or greater awareness of alternatives. In the contemplation stage, the focus is still on the CPP and how the person sees the world, their environment, and themselves. At this stage the person is evaluating, becoming more conscious of the pros and cons of any given behavior and beginning to seriously weigh them. As with the precontemplation stage, this stage focuses on patterns of perception, not on actions.

The preparation stage starts to involve actions that directly impact preexisting patterns of behavior—BPA. The preparation stage focuses on taking actions that alter a

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<sup>1</sup> Prochaska, James (1994); John C Norcross and Carlo Diclemente, *Changing for Good*, Avon Books, New York, NY

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person's environment in ways that does not support a given habit or behavior that is the target of change. In a situation where smoking is the target of change, there are many patterns of action that support smoking such as getting in one's car and driving to the store, asking the cashier for a particular brand of cigarette, opening the pack, pulling out a cigarette, lighting it, putting it to one's lips and inhaling. All of these steps involve a complex BPA that supports smoking. In the preparation stage, the focus of attention is not so much on the actual smoking behavior, but on all of the supporting behaviors that allow it to take place. At the action stage, the focus turns to the primary objective, which is changing a specific target behavior—such as not inhaling through a lit cigarette. The preparation and action stages are clearly about altering behavior and working to develop a new BPA.

The latter two stages of change—maintenance and termination—reflect ongoing focus on both maintaining the new CPP and BPA until both become habitual and completely eliminate the prior CPP and BPA.

Inherently, the stage of change model acknowledges both the cognitive aspect in terms of perception and thinking as well as the behavioral aspect in terms of actions and habits and affirms the relationship of both.

### **Cognitive Pattern of Perception (CPP)**

Every individual comes with a pre-existing set of priorities and attitudes. Very, very few people are neutral and come with a blank slate. This pre-existing set of priorities based on perceptions of what's important has formed and taken shape over a person's life-time and up until the point we encounter them. This is what we refer to as the *cognitive pattern of perception (CPP)*.

When a person is approached with a certain set of propositions such as changes in behavior (which could mean the adoption of a specific product, service), priorities (i.e., how important something *should* be) or attitudes (i.e., what they *should think* about something), his or her response to what we

have to offer will depend on the nature of their CPP. If a person responds with interest, listens to what you have to offer attentively, shows signs of thinking well of it, and a willingness to engage in the behaviors desired, this person is exhibiting a *favorable CPP* to the issue before them. On the other side, if a person responds with disinterest, works to ignore what you have to say, argues with you (whether out loud or silently in their minds), and expresses resistance to the things you are proposing, this person is reflecting an *unfavorable CPP*. This means that the CPP you encounter within a person can play a major role in the success or failure of what you seek to accomplish with them.

### Purpose of Understanding the Cognitive Pattern of Perception:

Insight into a person's CPP will help to:

- ? More effectively deal with vigilance or defense issues
- ? Reduce the risk of high negative contemplation that may result in resistance
- ? Increase potential for high positive contemplation
- ? Contribute to greater motivation to cooperate and comply

### **Breaking Down the Cognitive Pattern of Perception**

As a key step in determining how to deal with either state of cognitive perception we need to examine the elements shaping the CPP in more detail. The CPP can be broken down into three main components: 1) perceptual response, 2) contemplation activity, and 3) contemplation valence.

#### Perceptual Response

*Perceptual response* refers to whether or not a person is naturally “pre-wired” to pay attention or tune out. Based on many beer commercials, advertisers acknowledge men's natural “pre-wiring” around sex and attractive women. They get men's attention.

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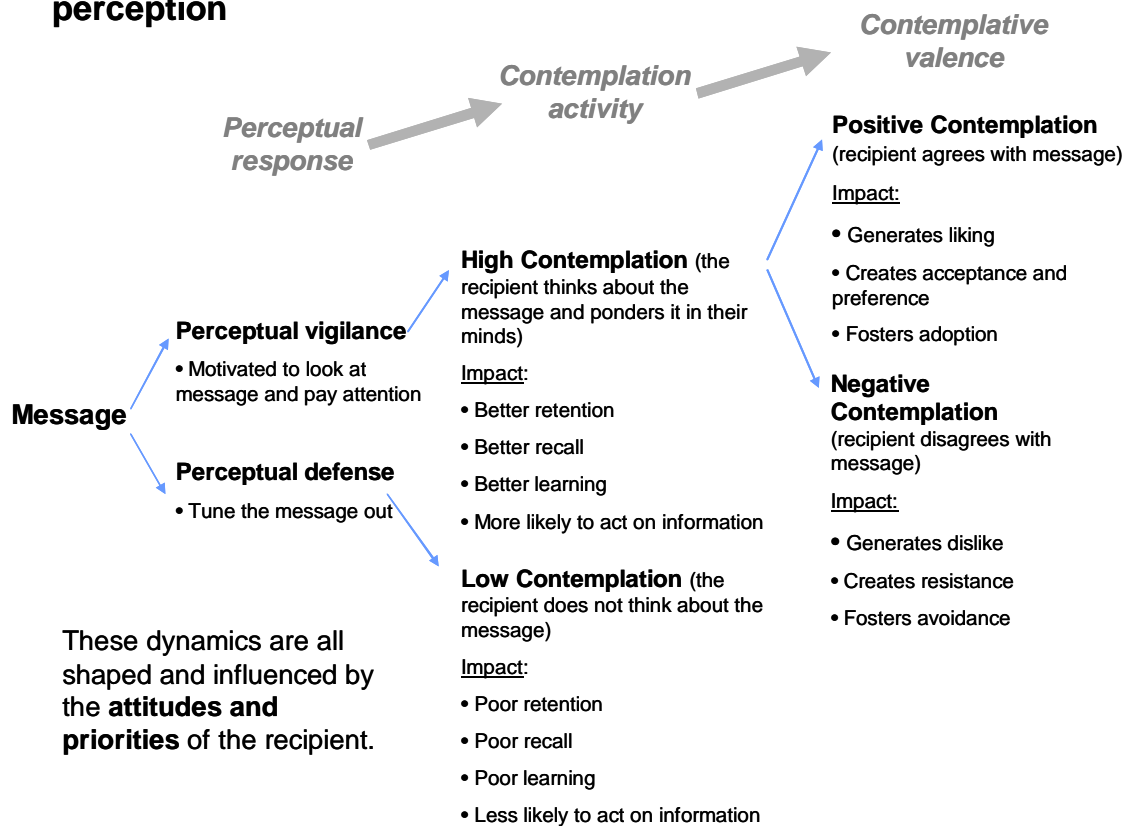
With respect to the promotion of feminine hygiene products, it is assumed that men are pre-disposed to tune out such messages, or at best give them little attention. This is what perceptual response represents—our likelihood of tuning in or tuning out a message or subject based on pre-existing bias.

This bias is not limited to physiological traits. The biases that affect perceptual response include common things like interests, attitudes, and priorities. I have an interest in astronomy and advances in space exploration technologies. I am naturally drawn to things that focus on these topics. If I hear something in my surroundings about this subject my ears perk up. My attention gets drawn. This response represents my state of perceptual vigilance on the topic of astronomy. In contrast, I have little interest in automobile style. When I am driving, all the cars I see might as well be gray and all the same shape because I just don't pay any

attention to them (except as things to be navigated around). In this case my perceptual response is to tune out differences that are irrelevant to me. This response represents perceptual defense. My mind filters out issues of low priority.

Perceptual response can, therefore, take two primary forms. If perceptual response takes the form of attentiveness, it is referred to as *perceptual vigilance*. Perceptual vigilance supports active learning in the individual. It means the person will have a longer attention span. Because he or she is actively involved, it means higher retention of information. This increases the likelihood that the information will be acted on in the future. If perceptual response takes the form of inattentiveness, it is called *perceptual defense*. In this state learning is generally passive (if it occurs at all). The person's attention span is lower and both result in lower retention of information. The lack of information retention decreases its

### Response dynamics shaped by the cognitive patterns of perception



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availability to the person and likewise decreases their propensity to act on it. These effects are summarized below:

*Perceptual vigilance, attentive*-person is naturally motivated to pay attention

- ? Learning is active
- ? Longer attention span
- ? Higher retention

*Perceptual defensive, inattentive*-person is naturally motivated to tune it out.

- ? Learning is passive
- ? Shorter attention span
- ? Lower retention

### Contemplation Activity

Contemplation activity is what comes next. *Contemplation activity* is the amount of time and/or mental effort we spend in thinking about something that has generated a perceptual response. Contemplation activity can be high or low in line with our perceptual response. If I hear something related to astronomy and I start to pay attention, all of the information I have stored in my memory on astronomy begins to come to the surface. I start evaluating the new information in the context of what I have heard or studied before. I start to categorize it and judge it. I relate it to the other well-anchored information in my mind for later retrieval. My contemplative activity on the topic is high. Compare this response to my response to stimuli related to automobile styles. Because my mind tunes out this kind of information, it has less chance of stimulating related information (which I have little of) or bringing it to the surface. The fact that I have very little of “automobile style” type information in my mind is also the result of my tuning out process. The combination of effects means low contemplation activity.

Contemplation activity has after-effects; the after-effects are determined by whether or not the contemplation activity is high or low. *High contemplative activity* contributes

to greater learning and retention; *low contemplative activity* results in little learning and poor retention. Going back to the astronomy example, my contemplative activity included memory recall, evaluation, categorization, association, and anchoring of new information. That’s a lot of contemplative activity all supporting greater learning and retention. The amount of activity reflected by my consideration of information related to automobile styles shows the opposite--very little memory recall, no categorization, association, or anchoring activity. The lack of this mental activity has its effect; it results in little learning or future retention. Either direction represents the *contemplative activity potential* of any given individual:

- ? *High contemplative activity* contributes to learning and retention
- ? *Low contemplative activity* results in little learning or retention

### Contemplative Valence

The last issue is contemplative valence. This may be the most important. *Contemplative valence* refers to the positive or negative nature of any contemplative activity. Are the thoughts directed to the topic or issue favorable or unfavorable? If someone starts to talk about astronomy my ears perk up and I start to pay attention. All of my positive thoughts about astronomy come to the surface. If I then hear the person start to say how unimportant and a waste of resources astronomy is, I start to react negatively. I start calling the person names in my mind. I question their intelligence and even begin to formulate how I might do them in, or at least cripple them. The valence of my contemplation is clearly negative, and it is certainly creating a memorable experience. But if I hear someone talking positively about astronomy and clearly supporting its value, I start to have favorable feelings about the person. I want to hear more of what they know, perhaps even their opinions on other matters. I wonder if I should exchange phone numbers with them. I entertain a

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picture in my mind of the person over my house having coffee. You get the picture. Here is a summary of the possible extremes:

*Contemplative Valence*-the direction of the contemplation and evaluation:

- ? High negative contemplation results in negative conclusions and resistance
- ? High positive contemplation results in positive conclusions and acceptance

The dynamic of contemplative valence is most critical in high contemplative activity situations. When someone is giving a lot of thought and energy to a topic, the positive or negative flavor of that thought has an opportunity to become more engrained, and to shape future thinking and action. This can result in greater cooperation and adoption, or likewise greater resistance and denial. This is why it is critical for us to know as much as possible about those topics or issues that are points of high contemplation for an individual and the existing valence of that contemplation.

### Dealing with Vigilance and Defense Issue

If you want to talk to someone about something they are already interested in, just start talking. If a person is perceptually vigilant to a specific topic, they will naturally pay attention and stay focused. Perceptual vigilance is easy to deal with. Just start talking. Not so with perceptual defense. If you want to talk to someone about something they have no interest in, you better keep them entertained. In practical application this means you must create engagement by *stimulating perceptual vigilance energy* through other means. If you don't do this, the person will tune out and start looking for ways to end the exchange as soon as possible. The various tactics and strategies offered in this manual to deal with perceptual defense issues have proven effective at increasing engagement in a controlled experimental trial.

### Dealing With Contemplative Valence Issues

The key thing here is the obvious. As a professional seeking to foster cooperation from a client, they need to see you as an ally and not an enemy. You need to be recognized as a professional who is working with them, who is in tune with their life and their priorities. The way you accomplish this is by generating as much *positive* contemplation in the patient as possible, and avoiding the pits of negative contemplation. In practical applications this means you must understand where the patient or client is coming from, accept and respect their point of view (CPP), do the best you can to *disarm* the potential sources of negative contemplation, and accommodate their own priorities. The various methods offered in this manual for accomplishing this have been proven effective in both one-to-one engagement situations, and broad based marketing communications application.

### **Behavioral Pattern of Action**

Closely allied with the CPP is the behavioral pattern of action. The *behavioral pattern of action (BPA)* represents the degree to which a person's pre-existing patterns of behavior are favorably or unfavorably disposed to a new target activity. Where the CPP addresses issues of attentiveness, evaluation, judgment, and response to communications, the BPA addresses the dynamics associated with adopting new behaviors or activities.

For our purposes, the BPA can be broken down into three main areas: existing behavior patterns, cognitive response, and adoption outcomes. *Existing behavior patterns* includes those existing behaviors the individual already engages in or practices that may relate to the new behavior. *Cognitive response* refers to the possible direction of thinking about the adoption of a new behavior in the context of existing behaviors. *Adoption outcomes* address the potential outcomes of adopting or not adopting a new behavior in the context of existing behaviors.

A favorable BPA means that a person already engages in behaviors that are

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compatible with the target action. It means they already practice behaviors that are supportive. This means the motivation already exists to make behaviors similar to the target behavior a priority. This should result in cognitive support, which means little resistance to the target behavior and more thoughts given to consideration, planning, and preparation for adopting and integrating the new target behavior. Here the focus of intervention should be on integrating new behaviors into existing compatible patterns. In this scenario, adoption will be easier, faster, and more enduring. If by chance the target behavior is not adopted, the result should be less severe since the person already engages in behaviors that are similar.

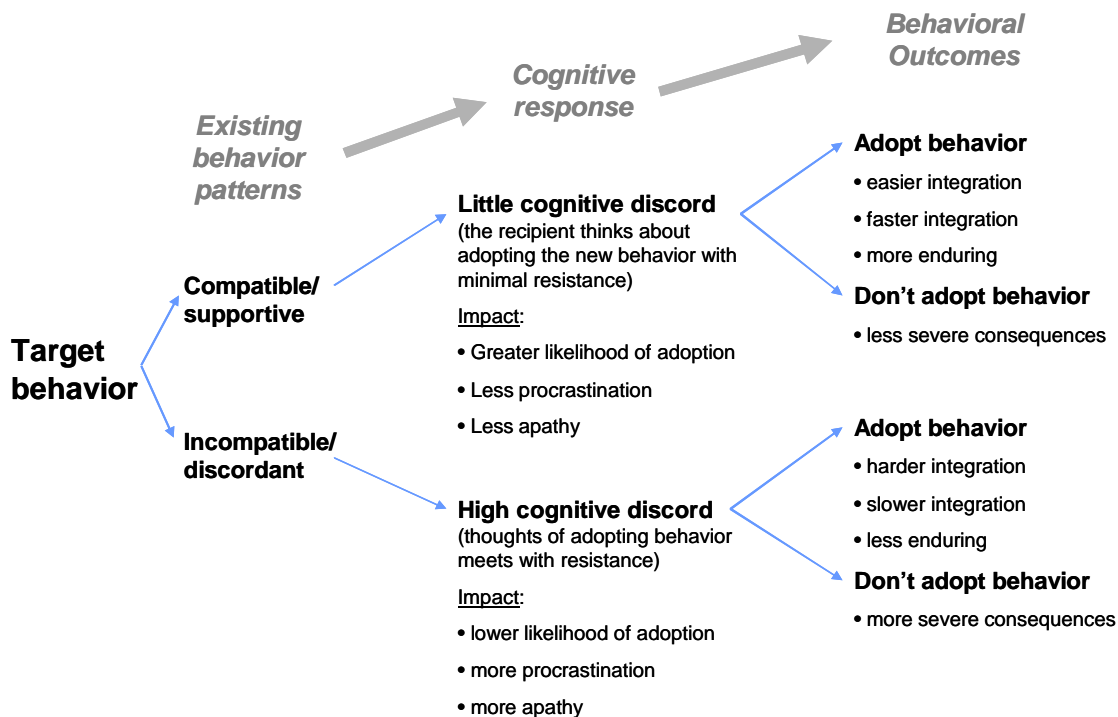
In contrast, an unfavorable BPA means that the person does not engage in behaviors or actions that are compatible with the target behavior. When a target behavior is presented to this state of incompatibility, the cognitive response is one of discord. The initial reactions to the discord can take the shape of postponement, forgetting, or outright dismissal. The person is motivated to

resist the target behavior in favor of the behavior the person has already adopted and approved. Deeper contemplation of the behavior change needed will create more discord as counter behaviors are considered. Adoption holds a precarious position in this situation. It will be harder, slower, and likely less enduring. In this situation, the focus of interventions needs to be more intensive on supporting new behavior in exchange for the incompatible or countering behaviors. This means more follow-up and a staged-intervention. Here, the results of non-adoption are more severe because incompatible old behaviors are maintained and the desired behaviors are not adopted. The dynamics are summarized as follows:

Favorable BPA:

- ? Behavioral compatibility
- ? Supportive behaviors
- ? Motivation to engage in similar activities already exists
- ? Adoption is easier and more enduring

### Response dynamics shaped by the behavioral pattern of action



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- ? Consequences of non-adoption are less severe

### Unfavorable BPA:

- ? Behavioral incompatibility
- ? Counter behaviors
- ? Motivation to resist the target behavior is high
- ? Adoption is harder and more subject to decay
- ? Consequences of non-adoption are more severe

### Implications of Existing CPP and BPA in Health Care

Disease management and wellness interventions focus on behaviors that can be grouped into basic areas like learning, communications with health care professionals, prevention focused behaviors, and health focused behaviors. The success of any of these interventions depends completely on the behavior of the client, whether in the context of employee, health plan member or patient. For example, learning activities like understanding the signs and symptoms of whatever disease they have, reviewing educational materials, or understanding the role of triggers depend on the motivation of the client. If the client is not pre-disposed to do this kind of work, meaning they have incompatible CPP and/or BPA profiles, having the disease is a weak predictor of motivation to do so. If a lack of confidence in the doctor exists, or a natural propensity to avoid health care exists, these psycho-social factors can over-ride and interfere with communication goals or engagement goals like increased self-monitoring, reading food labels, reducing salt intake, checking weight, inspecting feet, or developing or implementing an action plan. Health focused behaviors like healthy eating or a regular program of exercise and managing stress may suffer from the lack of favorable client pre-dispositions towards these activities due to incompatible CPP and BPA profiles.

On the other hand, a client who already exercises regularly should have little trouble incorporating exercises advocated by a wellness or disease management program compared to a client who does not exercise. A person who already tries to eat healthy and has an eye on nutrition should show little resistance to the nutritional guidelines of a wellness program compared to someone who doesn't. A patient who trusts health care professionals, or has a good relationship with and frequent contact with his or her doctor should easily incorporate the directed dialogue and contact with health care professionals advocated by disease management or wellness. All of these conditions point to a client with a favorable and compatible CPP and BPA profile.

### CPP, BPA and Stages of Change

It should now be clear that a person's preexisting CPP and BPA will have a direct impact on his or her response to interventions such as those based on the stages of change approach. A person with highly incompatible CPP and BPA to some target behavior will have a tougher time changing and staying changed than a person with more compatible CPP and BPA. If insight into a person's CPP and BPA can be obtained, the job of fostering and supporting change can be much easier.

### Conclusion

This is all to say that a client's success with managing a disease or adopting wellness is influenced by his or her pre-existing disposition to engage in the activities and behaviors both require. This predisposition, which is necessarily complex and multidimensional, is the outcome of cognitive patterns of perception and the behavioral patterns of action that may or may not be compatible with disease management or wellness goals.

A thing that needs to be understood about the cognitive and behavioral patterns of perception and action is that their effect on each individual is both short-term and long-term. In a health care context, the short-term impacts are across areas like

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engagement, compliance, persistence, and learning. The long-term impacts show up in the prevalence of disease, rates of co-morbidities, patterns of utilization and long-term health care costs as demonstrated by the PATH model.<sup>2</sup>

A primary weakness of today's disease management and wellness initiatives is the complete lack of attention to and recognition of these critical psychological/psycho-social forces within people and their impact on outcomes. It is the position of this paper that recognition of the fact that CPP and BPA exist can dramatically further both the efficiency and effectiveness with which disease and wellness focused interventions are handled, and support a major leap in the promotion of wellness among people now and well into the future.

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<sup>2</sup> Navarro, Frederick H. (2007) *The Hidden Dynamic Shaping Health Care Outcomes in Disease, Population Health Management and Employee Wellness*, PATH Institute Corporation, Fontana, CA