

The functional-cognitive meta-theoretical framework: Reflections, possible clarifications and how to move forward

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The functional-cognitive meta-theoretical framework has been offered as a conceptual basis for facilitating greater communication and cooperation between the functional/behavioural and cognitive traditions within psychology, thus leading to benefits for both scientific communities. The current article is written from the perspective of two functional researchers, who are also proponents of the functional-cognitive framework, and attended the “Building Bridges between the Functional and Cognitive Traditions” meeting at Ghent University in the summer of 2014. The article commences with a brief summary of the functional approach to theory, followed by our reflections upon the functional-cognitive framework in light of that meeting. In doing so, we offer three ways in which the framework could be clarified: (a) effective communication between the two traditions is likely to be found at the level of behavioural observations rather than effects or theory, (b) not all behavioural observations will be deemed to be of mutual interest to both traditions, and (c) observations of mutual interest will be those that serve to elaborate and extend existing theorising in the functional and/or cognitive traditions. The article concludes with a summary of what we perceive to be the strengths and weaknesses of the framework, and a suggestion that there is a need to determine if the framework is meta-theoretical or is in fact a third theoretical approach to doing psychological science.

Keywords: Functional-cognitive framework; Operational definitions; Behavioural principles; Theory.

The narrative on the history of modern psychology is relatively simple, but one which belies the complexity that actually prevails upon closer inspection. The simple story is that introspectionism was toppled by behaviourism, which was then supplanted by cognitivism. Although there is some substance to this basic story-line, it fails to reflect the fact that certain varieties of behaviourism were perhaps never mainstream and still survive to this day (e.g., behaviour analysis and contextual behaviour science: Hayes, Barnes-Holmes, & Wilson, 2012). Furthermore, although cognitive psychology is frequently perceived to be the antithesis of behaviourism, there have been recent calls to re-examine the relationship between these two traditions with a view to building a meta-theoretical framework within which both can cooperate to the benefit of all concerned (De Houwer, 2011; De Houwer, Barnes-Holmes, & Moors, 2013; De Houwer, Gawronski, & Barnes-Holmes, 2013).

The primary purpose of the current paper is to consider and reflect upon the so-called functional-cognitive meta-theoretical framework in light of the recent “Building Bridges between Functional and Cognitive Psychology” meeting at Ghent University. Given our background, we will approach this task largely from the perspective of functional-analytic psychology.

The cognitive tradition within modern psychology is typically guided by a mechanistic, mediational approach to psychological science, the goal of which is to understand the mental processes or representations that give rise to and guide behaviour (e.g., Bechtel, 2005). At the same time, a philosophically and conceptually distinct approach called functional contextualism (referred to hereafter as the “functional approach”) has also sought to explain behaviour but in terms of the interactions that occur between an organism and its past and present environments, without making reference to any mental

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constructs (e.g., Chiesa, 1994; Hayes & Brownstein, 1986; Hayes et al., 2012).

Historically, the cognitive and functional approaches have often been viewed as adversarial or mutually exclusive. However, the functional-cognitive framework views them as mutually supportive. Very briefly, research at the functional level of analysis may serve to constrain and thus improve the precision of theorising at the cognitive level, and cognitive theorising may generate new predictions about the contextual conditions that influence behaviour (e.g., De Houwer, Gawronski, et al., 2013). Critically, the framework does not imply superiority of a particular level of explanation. Whether one considers functional or cognitive explanations as the ultimate aim of psychological science depends on fundamental philosophical assumptions that go well beyond the framework itself (Barnes & Holmes, 1991; Hayes & Brownstein, 1986). The important point is that whichever level of explanation one prefers, the functional-cognitive framework argues that progress at one level can be facilitated by progress at the other level of explanation. Before reflecting upon the framework from a functional perspective it seems useful first to outline the functional approach to psychology.

THE FUNCTIONAL APPROACH TO PSYCHOLOGY

The functional approach in psychology has sometimes been associated with an a-theoretical stance (e.g., Skinner, 1950), which is ironic given that it is in fact richly theoretical, albeit in a manner that would be quite unfamiliar to cognitive psychology. Theory in functional psychology is driven by a focus on achieving the scientific goals of prediction-and-influence of specific behaviours (e.g., Hayes & Brownstein, 1986). To achieve these goals, functional researchers may begin by recording systematic observations of the interactions between individual organisms and their environments. For example, recording events that precede and follow challenging behaviours (e.g., aggression, self-injury) in an adult with learning disabilities may help to identify the variables that predict when such behaviours are likely to occur. As noted above, however, influence as well as prediction is a goal in functional psychology. Thus, it is important that functional psychologists identify variables that may be manipulated directly such that they change, modify or regulate the behaviour in question. As such, functional psychology focuses on environmental variables that are manipulable, at least in principle, in the service of changing behaviour. In the context of the forgoing example, the systematic observation of behaviour may indicate that challenging behaviours are more likely when the individual in question is given an academically demanding task, and that task is then removed whenever a challenging

behaviour is emitted (i.e., challenging functions as an escape response). This systematic observation thus identifies two ways of reducing challenging behaviour: one could either not present the academically demanding task in the first place, or not remove it when challenging behaviour is emitted.

If functional psychology involved little more than conducting these types of systematic observations, and suggestions for changing behaviour through the manipulation of environmental variables, then it would constitute little more than a technology for behaviour change. However, the science of functional psychology seeks to develop scientific concepts that allow researchers and applied workers to speak about environment-behaviour interactions in generally applicable ways. Such concepts are typically referred to as behavioural principles or processes (e.g., Catania, 1998). Thus, the classic concept of reinforcement as a behavioural principle is not restricted to any specific observation. Rather, it refers to any situation in which a particular consequence is delivered contingent on a particular activity, and that activity then increases as a result. Familiarity with this principle and a range of others that have evolved within functional psychology such as discrimination and stimulus generalisation provide both basic and applied scientists with the potential to predict and influence behaviour in general rather than only specific examples, such as challenging behaviours.

Critically, the value or truth of a behavioural principle is determined by the extent to which it allows the scientist to achieve the goals of prediction-and-influence in three ways, which are referred to as precision, scope and depth. These have been defined as follows:

“Precision means that relatively few ways of speaking [or explanatory concepts] apply to a given event; scope means that these ways of speaking apply to a variety of events; and depth means that ways of speaking at one level of analysis cohere with (or at least do not contradict) those at another level of analysis (e.g., biology, anthropology).” (p. 143; Hayes, Barnes-Holmes, & Roche, 2001b).

Functional psychologists are focused on behavioural principles not because they constitute the final objective of our scientific activities but because they provide the tools that make it possible to analyse (i.e., predict and influence) behaviour. In effect, behavioural principles are the means by which basic and applied researchers conduct functional analyses. Such analyses differ greatly from one instance to another, because complex behaviour varies so much across contexts. For example, functional analyses of tantrums in a young child versus depressive reactions in an adult may involve drawing on certain principles and not others. Temper tantrums may involve little more than appealing to discrimination and reinforcement, whereas depressive reactions may traditionally involve these as well as other principles such as respondent

learning, stimulus generalisation and response induction. These types of functional analyses are best seen as inherently individualistic enterprises because they deal with the behaviour of a specific organism in a specific context. There are times, however, when functional researchers seek to develop an overarching account of a specific domain, such as human language, based entirely on increasingly complex sets of functional analyses—in doing so, they are constructing a functional theory. There are thus increasing levels of sophistication in functional theorising, from individualistic functional analyses of “problematic” behaviours to functional accounts of very broad domains such as language.

As articulated by Hayes et al. (2001b), functional theories are *analytic abstractive*:

“Analytic abstractive theories are simply organized sets of behavioral principles that are used to help predict and influence behaviors in a given response domain. They are, in other words, coherent sets of functional analyses. This kind of theorizing is not [hypothetico-deductive] and mediational, but descriptive and functional. Analytic abstractive theory is used to shed light on the nature of psychological events within an important domain; the events are not used to shed light on the theory ... The relationship between behavioral principles and behavioral theories parallels precisely the relationship between behavioral observations and behavioral principles. In both cases, the shift is from the specific to the general case.” (pp. 143–144)

Functional psychology adopts this approach because it serves to increase the scope and depth of a given theoretical analysis without sacrificing precision.

THE FUNCTIONAL-COGNITIVE META-THEORETICAL FRAMEWORK

As noted at the beginning of the current article, there have been recent calls to create a framework to facilitate greater cooperation between the functional and cognitive traditions in modern psychological science. One of the primary reasons for seeking such cooperation is that it should lead to better explanations or theorising within both traditions. As described above, the functional approach starts with behavioural observations, from which behavioural principles are then wrought, which allow for functional analyses of complex behaviour and ultimately the formation of functional-analytic abstractive theories of entire domains, such as human language and cognition (e.g., Hayes, Barnes-Holmes, & Roche, 2001a; Skinner, 1957).

The differences and conflicts between the cognitive and functional approaches have been widely documented and discussed many times and there seems little point in rehearsing the details of these debates here (e.g., Chiesa, 1994). Suffice to say the two traditions are frequently characterised as being antithetical to one another, with the cognitive approach universally recognised as the currently dominant paradigm. The novelty of the functional-cognitive framework is that it acknowledges these differences and the historical conflicts arising there from, but argues that perhaps both approaches could in fact benefit from each other. The basic argument is that both approaches involve behavioural observations, which constitute the raw materials of psychological science. At this level, therefore, communication seems relatively straightforward because we are in a sense looking at the same events. The functional-cognitive framework therefore highlights that there is no need for complete intellectual divorce, and argues that both sides of the intellectual divide may benefit from maintaining their separate approaches to psychological science but engaging more actively with each other (De Houwer, 2011; De Houwer, Barnes-Holmes, et al., 2013; De Houwer, Gawronski, et al., 2013). That is, focusing on functional relations¹ can help cognitive researchers to describe behavioural observations in terms that are uncommitted to specific mental theories or constructs. Conversely, cognitive theorising may help to organise sets of functional relations in ways that serve to predict other novel functional relations that might otherwise not be made within the functional approach.

REFLECTING ON THE FRAMEWORK FOLLOWING THE “BUILDING BRIDGES” MEETING

In one sense, the functional-cognitive framework seems, at least to us, relatively uncontroversial. Once the realisation grows that functional and cognitive psychology engage in fundamentally different types of explanation, and therefore do not directly compete with each other, it is obvious to suggest that those two approaches should communicate more effectively to our mutual benefit. On balance, our experience at the “Building Bridges” meeting was that it was “successful” as a social or political event, but intellectually it seemed to miss the mark somewhat. This is not a criticism of the meeting *per se*, but simply an observation that serves as a stimulus for the remainder of the current article. We should add that shortly after

¹In the current article, we sometimes refer to “functional-analyses” (or the functional-analytic approach), and at other times we refer to “functional relations”. In general, references to functional analyses assume the involvement of formal behavioural principles, such as reinforcement. In contrast, the term functional relation is used in a broader sense here to refer to any causal relationship between or among psychological variables. For example, a “change in liking due to the prior pairing of stimuli” (De Houwer, 2007) may be seen as involving a functional relation without appealing to a specific behavioural principle.

the “Building Bridges” meeting Jan De Houwer, Yvonne Barnes-Holmes and Dermot Barnes-Holmes presented a version of the functional-cognitive framework at a large functional psychology conference in the United States, and we came away with a similar impression—a social or political success but intellectually we’re not sure we quite hit the target. From the current authors’ perspective, these experiences provide an opportunity to reflect upon the framework and to refine our efforts to convince our colleagues on both sides of the divide as to the potential value of the framework itself. In working towards this end, we walk through what we consider to be some important issues, thus highlighting possible areas in which the framework could be clarified.

Operational definitions are not functional analyses

In reflecting upon the functional-cognitive framework as currently constituted (i.e., De Houwer, Barnes-Holmes, et al., 2013; De Houwer, Gawronski, et al., 2013), it fails to make clear that identifying functional (i.e., causal) relationships between operationally defined constructs (i.e., IVs and DVs) is not synonymous with a functional analysis of behaviour. We believe that this lack of clarity may be problematic, and will now attempt to explain why we have come to this conclusion.

From our perspective, previous discussion of the functional-cognitive framework made a distinction between behavioural effects and cognitive theory, but did not make clear that behavioural effects can be described using the language of functional-analytic concepts such as reinforcement and discriminative stimuli, or alternatively in the language of operational definitions.² In the latter case, functional (i.e., causal) relations may be identified between operationalised variables, thus giving the impression that the researcher is operating at a purely functional level of analysis. Critically however, operational definitions are, ipso facto, imbued with the theoretical assumptions of the cognitive approach. Specifically, such definitions provide a way of operationalising theoretical *mental* or *cognitive* constructs. It may be possible to identify functional relationships between operationalised variables, but such a scientific strategy differs fundamentally from a functional analysis of behaviour using generic behavioural principles.

To appreciate the point we are making here, consider the definition of evaluative conditioning as a change in

liking or valence due to the prior pairing of stimuli (De Houwer, 2007). At first blush, this seems like a relatively precise functional definition, because it appeals to environmental variables and there is no reference to a mediating mental process. The problem, however, is that although liking (or valence) might well be defined operationally (e.g., as a score on a Likert scale), it is not a functional-analytic unit of analysis. That is, “liking”, at least implicitly, seems to refer to a mental state of finding a particular stimulus pleasant or positive in some way. Of course, it might be tempting to define stimuli that are liked as reinforcers, because these are functionally defined as evoking approach responses. However, the clash between operational and functional definitions becomes apparent if one raises the objection that individuals sometimes *approach* stimuli that they do not *like* (or evaluate negatively). For example, a boxer may approach an opponent in a ring in order to hit him. Functionally, the boxer may not “like” the opponent but does “like” the opportunity to engage in the fight. In effect, the opportunity to fight, and not the opponent, is the reinforcer. The point that we are making here is fundamental: when one adopts functional-analytic abstractive concepts (in this case, the concept of reinforcement rather than liking) the very target of the analysis changes from the *opponent* to the *opportunity to fight*. This immediate separation of explanatory paths between functional and cognitive psychology is illustrated in Figure 1.

As an aside, one reviewer of an earlier version of the current article suggested that when operational definitions are decoupled from cognitive theory, those definitions are rendered more functional than cognitive. In our view, they may indeed be rendered less cognitive, but such definitions are not therefore transformed into functional-analytic abstractive concepts. For illustrative purposes, let us return to the issue of liking again and define it, as the reviewer suggested, in terms of a preference. If preference is operationalised as choosing one object over another (A over B), this definition might appear quite functional because it simply describes a relationship between a stimulating environment (a choice between two objects A and B) and a response (choosing one of the objects). Critically, however, there is no functional-analytic abstraction here: no behavioural principles are invoked. Of course, we could label the object that is chosen a reinforcer, but then the definition of liking becomes largely irrelevant, because we have invoked a concept that is designed to help us achieve our scientific

²It seems important to note that using the term “effect” implies some form of functional relation between two variables. If one or both of these variables involves an operational definition of a mental or cognitive construct, then the use of the term “effect” introduces one of the problems that the framework was designed to solve – treating behavioural events as proxies for cognitive or mental events. Thus, in Figure 1, we make a distinction between effects as behavioural principles or as operationalised constructs. Furthermore, we make a distinction between such effects and “raw” behavioural observations, which do not imply any functional relation. For example, simply observing that when a rat presses a lever food is then presented may be considered a “raw” behavioural observation. In contrast, claiming that lever pressing occurs *because* food has been presented in the past for lever pressing invokes a behavioural principle (i.e., reinforcement). Finally, claiming that the rat presses the lever in an attempt to reduce some internal drive state may invoke an operational definition (e.g., of “hunger” or “wanting”).

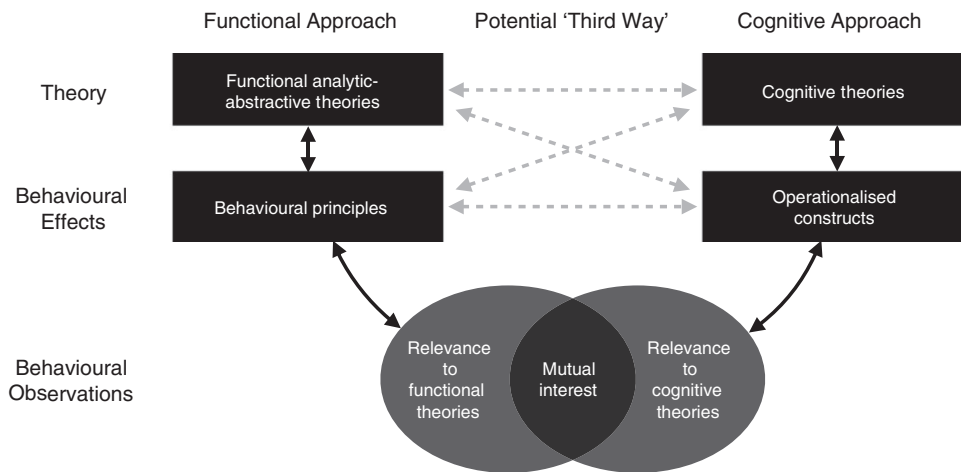


Figure 1. The suggested relationships among behavioural observations, behavioural effects and theory within the functional-cognitive meta-theoretical framework. The diagram highlights that behavioural observations are separate from functionally defined principles and operational definitions, with explanatory paths diverging early in the analytic process. The diagram also indicates that mutual interest is likely but not guaranteed at the level of behavioural observations but is far less likely at the level of effects or theory. An alternative functional-cognitive theoretical approach (i.e., a “third way”) is represented by the dashed arrows.

goal (i.e., prediction-and-influence with precision, scope, and depth). Working towards this goal does not require that we provide a definition of liking (or preference). In fact, focusing on liking could be seen as a distraction from the goal at hand.

When confronted with functional researchers’ apparent obsession with prediction-and-influence with precision, scope and depth, our cognitive colleagues understandably often lose patience with the functional approach—and by dint of this, the functional-cognitive framework. This reaction from cognitive researchers is entirely understandable. The fact that the use of a nonfunctional concept, such as liking, is seen as distracting functional researchers from achieving prediction-and-influence has virtually no impact on the cognitive research agenda, which is pursuing a fundamentally different explanatory path to that of functional research. In short, the two language games we are playing—the functional and the cognitive—begin to fracture, even when discussing what appear to be the most basic behavioural observations, because our basic assumptions and scientific goals, and thus our theoretical analyses, differ so dramatically.

Lack of motivation for communication at the theoretical level

It should be clear by now that explanations of behavioural observations differ between the functional and cognitive approaches. Given the divergence between the two

explanatory paths towards different types of theorising, we think it is important for proponents of the functional-cognitive framework to recognise and appreciate the inherent lack of motivation for communication between the two traditions. As proponents of this framework, frankly we underestimated this lack of motivation before the “Building Bridges” meeting in Ghent and the functional psychology conference in the United States. That is, communication between the functional and cognitive traditions at the level of theory, particularly as theorising becomes increasingly sophisticated, seems highly unlikely in most contexts. We do acknowledge, however, that mutual interest at the level of theory is possible (e.g., De Houwer, Hughes, & Barnes-Holmes, 2014; Fiedler, 2014; Hughes, Barnes-Holmes, & De Houwer, 2011).

On balance, the lack of communication at the level of theory may not be inherently problematic because the functional and cognitive traditions can be of mutual benefit to one another at the level of behavioural observations. But, an issue we did not fully appreciate before the “Building Bridges” meeting was that even at the level of behavioural observations there may be a distinct lack of motivation to communicate across the divide. The critical point here is that behavioural observations are only interesting insofar as they relate directly to theory. What became clear at the meeting was that some observations that are very interesting to functional researchers are not particularly interesting to cognitive researchers, and vice-versa.³ For example, functional researchers originally found equivalence class formation interesting

³Of course, as scientists, both functional and cognitive researchers may show some level of interest in almost anything in their field. However, what we are arguing here is that a specific threshold of interest must be reached before it impacts in some meaningful way on the scientific activities of that researcher (e.g., adopting a new methodology that was created by the other tradition).

because it was difficult to explain using existing behavioural principles. That is, research showed that reinforcing stimulus relations such as A-B and B-C often produced unreinforced or emergent relations (e.g., A-C and C-A), which could not be explained in terms of a history of direct reinforcement (see Sidman, 1994, for a book length treatment). From the perspective of a cognitive psychologist who is interested in deductive reasoning, however, stimulus equivalence could well appear trivial because it is readily explained using a specific mental model (see Johnson-Laird & Byrne, 1991).⁴ Equally, some functional researchers may not be particularly interested in conditioning-without-awareness, for example. From a cognitive perspective, this behavioural phenomenon is typically used to make inferences about associative versus propositional mental processes (e.g., Lovibond & Shanks, 2002). From a functional perspective, however, an individual's ability or inability to report verbally on her conditioning history does not necessarily have a critical bearing on the behavioural principles involved in producing that behaviour.

At this point it appears that there are behavioural observations that may be directly relevant only to functional theorising and other behavioural observations that may be relevant only to cognitive theorising. In these cases, communication and research activity that is of mutual benefit to both approaches seems unlikely. Nevertheless, there may be behavioural observations that are directly relevant to both functional and cognitive theorising, and it is here that mutual interest and benefit to both sides may arise. For example, research on the derived transfer of function phenomenon within the functional tradition appears to have been found interesting by cognitive researchers working on evaluative conditioning (e.g., Vervoort, Vervliet, Bennett, & Baeyens, 2014). In our view, this area of mutual interest emerged largely because the observation of derived transfer of functions may be used to elaborate or extend *existing* cognitive theorising—it was not, at least in our view, deemed interesting simply because existing cognitive theory was able or unable to explain derived transfer. Similarly, behaviour observed on the Implicit Association Test (Greenwald, McGhee, & Schwartz, 1998), a methodology generated within the cognitive tradition, was found interesting by the current first author because it facilitated the development of a methodology (i.e., the Implicit Relational Assessment Procedure: Barnes-Holmes et al., 2006) that subsequently and thus indirectly advanced functional *theorising* (the Relational Elaboration and Coherence model: Barnes-Holmes, Barnes-Holmes, Stewart, & Boles, 2010; Hughes, Barnes-Holmes, & Vahey, 2012). Once again, behaviour on the IAT was

not found interesting simply because existing functional theory was able or unable to explain it.

The foregoing point, we feel, has sometimes been missed within the functional-cognitive framework. That is, specific observations are found interesting by researchers for a range of idiosyncratic reasons above and beyond whether they can or cannot be explained by a particular theory. From this perspective, the functional-cognitive framework provides an intellectual and perhaps even social context for mutual interest in particular behavioural observations to emerge, and to pursue them in the absence of squabbling over irreconcilable philosophical differences on the aims and objectives of psychological science. The functional cognitive framework should not be seen, however, in our view, as something that will automatically generate either mutual interest or the behavioural observations that will serve to generate such interest. Put simply, the functional-cognitive framework is meta-theoretical and thus clarifies how the functional and cognitive approaches can communicate with one another: it is not, as currently constituted, a third theoretical approach in and of itself.

WHERE TO FROM HERE?

In light of the foregoing reflections and clarifications, one might rightly ask, “how do we move forward?” It appears that there are two options currently available. On the one hand, we can simply acknowledge that motivation to communicate between the functional and cognitive traditions at the level of theory is likely to be very low, with only rare exceptions. In doing so, proponents of the functional-cognitive meta-theoretical framework might thus focus their efforts on communicating about behavioural observations that both traditions are likely to find interesting. One option for a subsequent meeting, therefore, could involve putting theoretical issues to one side and asking participants to consider, discuss and explore behavioural observations that might be of interest to both traditions.

On the other hand, we could attempt to render the framework as a third *theoretical approach*, rather than a *meta-theoretical framework*. The current meta-theoretical framework, as depicted in Figure 1, presents two theoretical approaches operating in parallel, with mutual interest occurring largely if not exclusively at the level of behavioural observations. In contrast, a third functional-cognitive theoretical approach would additionally require ongoing interactions between the functional and cognitive traditions at the level of effects and/or theory (as depicted by the dashed arrows in Figure 1).

⁴In making this point we are recognising that neither approach to psychological science is entirely homogeneous: individuals or specific groups within each approach may find an effect interesting or not.

One example might involve first interpreting behavioural observations using behavioural principles (rather than operationalised constructs), but then employing operationalised constructs and/or engaging in more complex cognitive theorising. And, thereafter perhaps, reengaging with functional-analytic abstractive theorising. Recent attempts to identify potential areas of convergence and divergence between the functional-analytic abstractive account of human language and cognition, known as Relational Frame Theory, and a propositional account of implicit attitudes provides a relevant example of such an iterative dialectic between the two traditions (see Hughes et al., 2011). Another example might be to focus simply on specifying functional relations (i.e., effects). However, this approach would provide little or no guidance on when it would be appropriate or useful to embrace theoretical issues, be they cognitive or functional-analytic abstractive. Whether such intellectual efforts will eventually yield a well developed third theoretical approach, in and of itself, remains to be seen. At the current time, particularly in the historical context of the recent “Building Bridges” meeting, it is difficult for us to see how this might be achieved given the inherent lack of motivation to engage at the level of theory, or even behavioural effects. We do, however, remain open to a “third way” as a potential possibility.

SUMMARY AND CONCLUSIONS

In closing, we will summarise what we consider to be the potential strengths and weaknesses of the functional-cognitive meta-theoretical framework as we have reflected upon it here. With regard to strengths, there appear to be at least three. First, the framework may serve to decrease conflict between the functional and cognitive communities by dispensing with the notion of which theoretical approach is “correct” or “right”. Second, the framework provides formal recognition that the two traditions can in principle find areas of mutual interest and possible benefit by focusing on behavioural observations instead of effects and/or theory *per se*. Third, the framework acknowledges that a possible advantage to having two very different approaches to psychological science is that one approach may generate behavioural observations, make predictions and generate analyses that the other might not.

With regard to weaknesses, there also appear to be three. First, given that discussion is likely to be at the level of behavioural observations, the communication between the two traditions could be seen as inherently trivial given that our aspirational scientific products are theories and not mere observations. Second, many behavioural observations that are of interest to one approach will not be of interest to the other. Hence, interaction and communication may be largely informal and sporadic,

and will occur at individualistic levels. Third, any mutual benefit will be largely incidental, rather than by design, because there is mutual lack of interest in each other’s theorising. That is, the framework allows for and clarifies the means by which the two approaches can cooperate, but does not specify the conditions necessary to support that cooperation.

Finally, aside from these strengths and weaknesses, there is a need to clarify the extent to which the proposed framework is treated as *meta-theoretical* (i.e., standing above and apart from both the functional and cognitive approaches) or as a proposed *theoretical* “third way” to do psychological science. In light of these strengths, weaknesses and clarifications we are optimistic that psychology as a science will benefit from increased communication and greater cooperation between the two traditions. How this will unfold more fully is yet to be seen, although focusing, at least initially, on the level of behavioural observations (i.e., a meta-theoretical framework), rather than effects and theory (i.e., a third theoretical approach), would seem the most sensible strategy to move us forward. In any case, we are genuinely excited at the prospect of building bridges rather than building walls.

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