Running head: CLASSIFYING WHAT PSYCHOTHERAPISTS DO

Classifying what psychotherapists do: A first step

Isaac M. Marks*
Institute of Psychiatry, King's College London, UK

Miquel Tortella-Feliu
University of the Balearic Islands, University Research Institute of Health Sciences, Spain

Lorena Fernández de la Cruz
Institute of Psychiatry, King's College London, UK

Miquel A. Fullana
Anxiety Unit, IAPS, Hospital del Mar, Barcelona, Spain, and Autonomous University of Barcelona, Spain

Michelle G. Newman
Pennylsvania State University, PA, USA

Mehmet Sungur
Marmara University, Istanbul, Turkey,

for the Common Language for Psychotherapy Task Force,www.commonlanguagepsychotherapy.org

*Corresponding author: Isaac M. Marks, 43 Dulwich Common, London SE21 7EU, UK
Phone (+44) 208 299 4130. E-mail: isaac.marks@kcl.ac.uk

ABSTRACT

In order to become more scientific, psychotherapy needs an empirical classification of all its procedures in a common language. This is now possible. The website www.CommonLanguagePsychotherapy.org gathers brief descriptions by therapists of what they actually do when using a procedure, not why they do it; each includes a short Case Illustration. Descriptions so far by 97 therapists of 84 psychotherapy procedures have stimulated a practical classification using 16 domains (classes of therapist action). These apply across therapists' orientations. A pilot inter-rater comparison of which domains feature in given procedures found encouraging reliability. Distilling the multitude of procedures into far fewer descriptive domains could facilitate communication and dismantling research in psychotherapy.

Key words: Classification, psychotherapy, procedures, therapists' actions.

Classifying what psychotherapists do: A first step

Psychotherapy procedures need a generic classification

Two classifications concerning mental health are in everyday use. Psychopathology is classified by its symptoms and signs (American Psychiatric Association, 2000; World Health Organisation, 1992), and psychotropic drugs by their action e.g. antipsychotics. In contrast, psychotherapy procedures lack an empirical classification. Taxonomy is central in science to aid communication, information retrieval, description of the objects of study, theoretical formulation, and prediction (Blashfield & Dragun, 1976). This paper is a step towards classifying therapists' actions empirically which others can improve on.

The path to classifying therapy procedures is not simple. In 1950 Raimy gibed that psychotherapy was an undefined technique for which rigorous training is recommended, while 30 years have passed since Goldfried (1980) called for a common therapy language. No consensus has emerged despite many efforts. Numerous authors carefully teased out procedures present in cognitive-behavioural (CB) and/or psychodynamic/interpersonal (PI) treatments (e.g. Ablon & Jones, 1998; Blagys & Hilsenroth 2000; Castonguay, Goldfried, Wiser, Raue, & Hayes, 1996; DeRubeis & Feeley, 1990; DeRubeis, Hollon, Evans, & Bemis, 1982; Feeley, DeRubeis, & Gelfand, 1999; Gaston & Ring, 1992; Goldfried, Castonguay, Hayes, Drozd, & Shapiro, 1997; Hayes, Castonguay, & Goldfried, 1996; Hayes, & Strauss 1998; Jacobson et al., 1996; Jones & Pulos. 1993; Tang & DeRubeis, 1999; Whisman, 1993). The authors often gave varying names to similar procedures and categories, grouped them in varying numbers of categories containing varying numbers of procedures (e.g. 19 in Gaston & Ring's [1992, p.137] Inventory of Therapeutic Strategies

[ITS], 39 in Goldfried et al's [1989; 1997 p.743] Coding System of Therapeutic Focus [CSTF]), and omitted non-CB/non-PI procedures.

The absence of a common language across orientations is not surprising. A daunting array of psychotherapy procedures is used around the world and their number and names grow apace. The names of procedures may not convey what a therapist does when using them and concise accounts of what they do are uncommon. Classifying therapy procedures empirically regardless of approach has been difficult partly due to lack of an easily-accessed set of pithy descriptions of such procedures across all orientations. Change is on the way with an approach which is feasible and reliable.

The common language website

Brief portrayals of psychotherapy techniques in a common language are appearing. Therapists have supplied succinct empirical descriptions of psychotherapy procedures for the website www.commonlanguagepsychotherapy.org. This website is the expanding international project called "Common Language for Psychotherapy (clp) procedures". It shows descriptions of procedures by therapists from many orientations including CB and PI. They describe in plain language what therapists actually do, not why they do it, when using a procedure which has been noted in a peer-reviewed publication. Each clp description is brief and practical in a common format including a short Case Illustration which is real but anonymous. It shows what a fly on the wall would notice the therapist doing when using the procedure. The descriptions eschew theory as far as possible, although theory and procedure can be hard to unravel. They are starting to be used as a teaching aid. The lengthening lexicon of psychotherapy procedures on the clp website allows an intuitive step to be taken to classify them pragmatically and economically. We are deeply indebted to the 97 authors so far who have generously supplied the 84 entries to

date. (The name of the author of each entry in the website appears in 3 ways: in the alphabetic lists of accepted entries, those entries' authors, and at the head of their entry/ies. The names of authors of entries cited in this paper also appear under Acknowledgements below in the Author Note. Portrayals by more authors of further procedures are in phases of submission and editing.

The authors of entries on the clp website are from 13 countries around the world. There is great diversity among some of the procedures they depict e.g. *Habit Reversal* vs. *Internalized-Other Interviewing*, and similarity among others e.g. *Internalized-Other Interviewing* and *Two-Chair Dialogue*. We are reminded of the voyages of discovery starting 600 years ago which brought an amazing array of flora, fauna, geologic and cultural phenomena to the attention of scientists for the first time and led to major scientific advances. That array facilitated Linnaeus's binomial classification of plants and animals in the 18th century which evolved into that used today.

The clp website gives quick access to a growing display of psychotherapy procedures which are described simply in a common format. This can catalyse their classification. The preliminary taxonomy below will have to be adjusted as readers suggest changes and as new entries show further procedures. In addition, the empirical portrayal in one place of many psychotherapy procedures from diverse sources draws therapists' attention to practices they may not themselves employ or even know about but might find useful. It can also draw their attention to procedures that they do indeed use but are also applied by other practitioners under different names they may not have heard of. When large audiences are asked if they are familiar with a particular procedure almost none may put up their hand, especially if its label reflects an orientation different from that of the audience. As examples, a *Decisional Balance Exercise* during motivational interviewing

resembles Tchudi's ABC Technique and relates to an aspect of *Fixed-Role Therapy*, while *Cognitive Restructuring* and *Transference Interpretation* seem somewhat related despite their contrasting theoretical origin. A therapist's actions during *Imago Relationship Therapy* are unclear from its label but obvious in its clp entry – many of those actions appear too in other procedures.

The entries on the clp website enable this paper to sketch a tentative taxonomy of psychotherapy procedures on empirical lines. We hope this might facilitate communication, research and perhaps some integration across different orientations.

Issues shaping this attempt at classification

At least seven features of the clp website are relevant to its use in trying to classify what therapists do:

1. The entries describing procedures are operational and ecumenical across orientations, including acceptance & commitment therapy, behavioral, cognitive, cognitive-analytic, couple, family, interpersonal, meditational, morita, psychoanalytic, psychodynamic, Rogerian and systemic approaches. This aids the generalization of fine earlier work with CB and PI approaches (op. cit.). At first more entries came from therapists with CB compared to other backgrounds, but the more recent inclusion of entries by therapists from diverse orientations is making a general classification attainable.

2. Entries describing the procedures are sent by authors in response to seeing the clp website or to invitations by the clp Task Force. So far the website's entries describe only a minority of all therapy procedures. An ultimate aim is to depict descriptions of most therapy methods from all orientations, including new procedures as they appear.

3. The procedures concern diverse types of patients as well as modes, contexts, and intensities of therapy. Such procedures may be used with people of any age (children,

teenagers, adults, the elderly), with any kind of disorder (e.g. addictions; anxiety, conduct, mood and personality disorders; schizophrenia), across different modes of therapy (individual, group, couple, family) and contexts (outpatient, inpatient, school, community) of application, and for any duration (from a single session lasting just a few minutes to many sessions over years).

4. Some procedures resemble one another despite contrasting names e.g. *Coping Cat*; *Exposure*. Others differ appreciably despite similar labels e.g. *Applied Relaxation*; Progressive Muscle Relaxation.

5. Determining which ingredients in a therapy transaction constitute a "procedure" is not always easy. Any description is an arbitrary "cherry pick". An entry may refer to a very specific method e.g. *Empathy Dots Use*; *Task Concentration Training*, or to more complex procedures comprising quite a few practices e.g. *Imago Relationship Therapy*; *Triple-P Positive Parenting Program*. It is also difficult to distinguish complex procedures from even broader approaches whose portrayal is beyond the reach of the clp e.g. cognitive behavior therapy; psychoanalysis, systemic therapy.

6. Each clp entry refers to what its particular author-therapist, as opposed to all therapists, tends to do when using that procedure. Other therapists may employ that procedure rather differently. An example is the entry for *Ritual Prevention*, which depicts its application across tens of sessions while other practitioners might apply it as self-help guidance over just one or two sessions. Another example is the clp entry for *Imagery Rehearsal Therapy for Nightmares* which portrays the formulation and rehearsal of a new pleasant dream, while a related method involves rehearsing both the nightmare itself plus a new triumphant ending. In time a range of entries might illustrate appreciable variations in a procedure,

although again problems will be posed in deciding which variations are distinct enough to warrant separate entries.

7. A clp portrayal of a procedure does not endorse its effectiveness and efficacy. The task of evaluating whether a procedure "works" differs from the task of describing it. Though a clp entry is no guide to the wider value of the procedure portrayed, an empirical classification of procedures could aid the design of studies to detect which ingredients are effective. An entry's Case Illustration may show the result in one patient, and the entry's References section may include wider evaluations of the procedure.

Classifying procedures by an index

An index of procedures is not a viable classification. First, there are far too many of them – 84 so far on the website. Second, though visitors to www.commonlanguagepsychotherapy.org can quickly see a description of a procedure that interests them by clicking on its name in an alphabetic list, that procedure might hide under another name or be part of a more complex procedure. For example, "stress-immunization" is described under *Anger Management*, while "scheduling" appears without that label under *Stimulus Control of Worry*. This snag can be managed by adding "stress immunization", "scheduling" etc. to the index. Finding a procedure can also be hastened by indexing names in more than one way, e.g. *Triple-P Positive Parenting Program* can be indexed under "parenting program" as well, while *Promoting Resilience* can be indexed too under "resilience training".

An alphabetic index of procedures may also fail to direct a reader to techniques that are used primarily within specific contexts. For example, some procedures are used mostly with children or couples or families, or to manage dreams, grief or other particular clinical

problems. Identification of contexts for using techniques can be handled by subsidiary indexing of “children”, “couple”, “dreams”, “grief” etc.

Page numbering of an alphabetic index of a growing number of procedures is problematic when they appear online on screens whose numbering order changes often. To deal with this, an online index could link every name of a given procedure to: (a) the name of the clp entry which describes it on its own or as part of a wider package; (b) special types of clients and settings where the procedure is used; and (c) empirical domain/s which contain that procedure and related ones.

Though a good index can point readers quickly to each of a host of psychotherapy procedures and their congeners, it remains hard to see the wood for the trees until the number of classification categories is condensed into far fewer meaningful domains. Such a précis can be achieved by intuitively carving what therapists do at empirical joints. Such a task is eased by digesting the trove of authors’ concise entries in www.commonlanguagepsychotherapy.org.

Classifying procedures by empirical domains

When one reads authors’ descriptions of procedures, similar and different classes of action become obvious. For example, though the phrase isn’t used, the action of “externalizing a patient’s feelings and thoughts” can be discerned in, among others, procedures like *Anger Management*, *Cognitive Restructuring*, *Habit Reversal*, *Internalized-Other Interviewing*, *Reciprocal Role Procedure*, *Transference Interpretation*, and *Two-Chair Dialogue*. Externalizing a patient’s feelings and thoughts is a domain, a type of therapist action present in certain procedures but absent from others.

A domain is a pragmatic construct, a class of therapist action present in many or a few procedures, or, rarely, in just one procedure. Importantly, it **ex**cludes other procedures,

making a domain approach to classification testable. The aim is not to find non-specific factors common to everything that therapists do. It is not a "Dodo" approach giving prizes to all. Rather, the aim is to display in action as many procedures as possible from as many theoretical approaches as possible, and to promote communication by distilling that multitude of procedures into far fewer descriptive domains across traditional theories. Classification along such lines could facilitate access to information and empirical research in psychotherapy.

Domains detected in procedures on the website.

It is unclear how many domains can best classify all psychotherapy procedures empirically. TABLE 1 lists 16 intuited domains and their definitions which emerged when two of the present authors (IMM and MT-F – both clinicians) carefully examined the first 81 clp-website entries for procedures, including their Case Illustrations, which were available at the time from 94 authors across the world. IMM and MT-F independently inspected each procedure's entry and identified which domains (classes of action) appear in its description. They discussed discrepancies and eventually agreed and defined a provisional list of 16 domains (TABLE 1) containing every domain which appears in one or more entries for procedures.

Insert TABLE 1 about here

The 16 domains are: Attention-Focusing (AF); Body Skills Training (BST); Contingency Management (CM); Distraction (Dis); Environmental Change (EC); Education (Edu); Empathy expression (Emp); Externalize Feelings and Thoughts (EFT); Exposure (Exp); Goal Planning & Attainment (GPA); Homework (HW); Interpersonal Skills training (IST); Modeling (Mod); Reframing (Ref); Rehearsal and Role Play (RRP); Therapist's Self-Instruction (TSI). Out of the 16 domains 6 seem fairly distinct from one

another: CM; Dis; EC; Emp; Mod; TSI. The remaining 10 domains overlap somewhat with one or more of the other domains. This list of 16 domains and their definitions will have to change as other therapists give feedback and as website entries appear describing further procedures.

After agreeing and defining which domains appeared in each procedure, IMM and MT-F entered those domains into appropriate cells in a table showing the 81 procedures in rows and the 16 domains in columns. That full table is too big to include here but will appear in the clp website; its flavor is conveyed in TABLE 2 which is an extract of the full table to show the domains detected in 23 of the 81 procedures. APPENDIX A clarifies how one, six, and twelve domains were detected across clp-website entries for three procedures.

Insert TABLE 2 about here

In the great majority (three-quarters) of the 81 procedures the therapist's actions came from 2-6 out of the total of 16 domains. One procedure each featured 1, 11, 12 or 13 domains. No procedure featured 14, 15 or 16 domains.

Inter-rater reliability of detecting domains

In a small pilot test of inter-rater reliability, four students (final-year Bachelor of Psychology students at the University of the Balearic Islands) rated which of the list of 14 domains identified by then appeared in each of ten clp-website entries describing a procedure. Those ten entries were chosen from several psychotherapy orientations, and were: *Acceptance*, *Anger Management*, *Behavioral Activation*, *Cognitive Defusion*, *Countertransference Use*, *Decisional Balance*, *Danger Ideation Reduction Therapy*, *Fixed-Role Therapy*, *Guided Mourning*, *Mindfulness Training*.

The students proceeded largely as the two authors IMM and MT-F had done. First, the students independently read in turn each of the ten website entries describing

procedures, and then judged which of the 14 domains appeared in the procedure it described, and entered those domains into the appropriate cell in a table comprising 10 procedure rows and 14 domain columns (resembling TABLE 2).

Inter-rater reliability was measured by the percentage of agreement (a) among the four students rating the presence and the absence of each domain in each of the ten procedures, and (b) between the students and the two authors. Percentage of agreement was calculated for the presence and the absence of a domain in a procedure, and for the domain's presence only (see TABLE 3).

Insert TABLE 3 about here

Among the four students in the pilot test, the percentage overall agreement was encouraging for rating the presence and the absence of domains within each of the ten procedures both among themselves and between them and the two authors IMM and MT-F. Agreement was fair although a bit lower for presence-only analyses, where the students had to rate a cell only when a domain was present in a procedure row but could leave the rest of the cells in that row blank.

The mean percentage agreement among the 4 student raters across 10 procedures closely resembled earlier agreement between the two clinician-authors (IMM and MT-F) who had first identified independently, before discussion, domains across 38 procedures. Agreement for domain presence and absence was 91% among students and 88% between the two clinicians. Agreement for domain presence only was 72% among the students and 72% too between the clinicians.

Ambiguities in rating domains. The four students pointed to some ambiguities when making their ratings (APPENDIX B, TABLE B1). Analysis of those and other ambiguities led the authors to clarify the definitions of some domains and to add two

further domains (Distraction, and Empathy Expression), expanding the original 14 to a new total to 16 domains. The analysis discerned several types of ambiguity:

1. More than one domain may be involved in the *same* part of an entry's description of a procedure. For example, in the *Acceptance* entry, "ask a client reluctant to feel anxiety during pursuit of a valued relationship to allow each sensation felt when frightened to remain as it is" constitutes both BST and Exp.

2. A similar kind of action may represent more than one domain across certain procedures. One example: "training to breathe deeply, slowly and regularly BST during upsetting sensations, feelings & thoughts" is also an Exp aspect of *Live and Interoceptive Exposure*, *Ritual Prevention*, *Mindfulness Training* and *Speech Restructuring*.

A second example is training patients to become aware of augurs which herald anger, tics, stuttering or other impulses in order to nip them in the bud, as in the clp entries for *Anger Management, Habit Reversal* and *Speech Restructuring,* and in procedures to reduce encopresis, enuresis and epilepsy (no website entries yet). When the augur which is detected is a sensation it is BST, and when it is a thought or feeling it is EFT. This ambiguity stems from the overlapping meanings of sensation and feeling.

A final example: when a therapist tries to help people change particular perceptions or beliefs Edu it can also be called Ref, as in *Cognitive Restructuring, Danger Ideation Reduction Therapy, Dream Interpretation, Experiment, Repertory Grid Technique, Transference Interpretation.*

3. Related to 2., the same kind of action may represent different domains across procedures. For example, AF to neutral thoughts, sensations, and feelings (as in *Task Concentration Training*) is not Exp, but when those are unpleasant the AF also constitutes Exp (as in *Interoceptive Exposure* and some aspects of *Mindfulness Training*).

4. The degree of presence of a domain may vary across a continuum. For example, many procedures include a brief explanation of the rationale for the therapist's actions, others include none, and in further procedures therapists spend enough time explaining this to call it Edu. It is hard to judge at which point Edu is reached in the continuum across procedures from zero to formal education.

Number of procedures featuring particular domains

Of the 81 procedures on the website at the time, 45 featured EFT, 42 HW, 40 Ref, 33 GPA, 32 Edu, 29 Exp, 28 RRP, 26 AF, 24 IST, 22 CM, 20 Emp, 19 EC, 15 Mod, 14 BST, 7 TSI, and 5 Dis.

EFT, the most common domain, appeared in entries for 45 procedures from a wide spectrum of approaches - psychodynamic, cognitive-analytic, cognitive-behavioral, interpersonal, personal-construct, and systemic. Almost as common were HW (in 42 procedures) and Ref (in 40). Notably, HW was absent from all 9 entries for psychodynamic procedures; also absent from every psychodynamic entry were all the remaining domains except for Ref present in 6, Emp and TSI in 5 each, and AF in 1, psychodynamic entries.

Number of domains in procedures

Of the 81 procedures, 8 featured actions from just one or two domains and 51 procedures concerned three to six domains, while the remaining 22 procedures involved seven or more domains. Most of the procedures excluded most of the domains.

Co-existence of particular domains in procedures

Occasional domains never appeared together in any of the 81 procedures e.g. Mod and TSI. Some domains rarely co-existed with certain others, e.g. when Mod appeared (15 times), in 2/3 (ten) of those times it did not appear together with EFT in EFT's 45 appearances.

In contrast were domains which co-existed often. Mod tended to co-exist with HW (11/15 times) in HW's 42 appearances. GPA tended to coexist (21/33 times) in HW's 42 appearances. EFT and Ref co-existed in over half of the procedures where they could have appeared together - 28 times in EFT's 45 and Ref's 40 procedure appearances (EFT featured without Ref in 17/45 entries while Ref came alone in 14/40 entries).

One could do cluster analysis and Nvivo (2010) qualitative analysis to detect the most coherent clusters of domains across procedures and their degree of independence from one another. Such analyses would go beyond the remit of this paper.

Mapping current domains onto past authors' categories

Of the above 16 domains, seven domains (CM, Edu, EFT, GPA, HW, Ref, RRP) appear in the lists of therapist actions given by previous authors (Blagys & Hilsenroth, 2002; Gaston & Ring, 1992; Goldfried et al., 1997) (APPENDIX C, TABLE C1), while nine domains (AF, BST, Dis, EC, Emp, Exp, IST, Mod, TSI) seem absent from those lists. A type of action absent from the 16 suggested domains but noted by Blagys and Hilsenroth (1992) is Direct Session Activity - set an agenda on what to discuss, direct patient toward preplanned topics & tasks during sessions. Such directiveness already seems present in Exp, GPA, HW, IST, Mod and RRP, so it has not been added as a 17th domain.

Why did nine domains appear in the 81 clp procedures over and above the seven domains noted in previous reports? One reason might be that, as noted earlier, the 81 procedures come from a wider orientation-base than just CB and PI. A further reason might be that it can be paradoxically easier to detect what a therapist actually does in a short clp-website entry (especially its Case Illustration) which is shorn of the rationale for the action, than in many papers in the literature which devote more space to theory than to an empirical portrayal of what a fly on the wall might notice.

Discussion

Lack of a widely-agreed empirical classification of psychotherapy procedures is one of the language barriers that prevent psychotherapists from reaching a consensus about a core body of knowledge (Goldfried, 2000). A step toward lowering this barrier might be to classify all psychotherapy procedures empirically by their domain profile, i.e. those classes of action, out of a limited set, which feature in a practical description of a procedure. Such a classification could advance psychotherapy's scientific method by giving therapists from diverse backgrounds a quick way of summarizing for one another what they actually do, and helping process-outcome researchers choose what to dismantle out of the many things done in any treatment. We concur with Klerman (1986 - cited by Beutler 2009) that psychotherapy has particular ingredients which are consistent, trainable and replicable across therapists.

As a start, we provisionally identified and defined 16 domains by examining previous authors' seven categories (op. cit.) and the brief operational descriptions of 81 therapy procedures by 94 authors from many orientations which were available at that time in www.commonlanguagepsychotherapy.org. The 16 provisional domains are: Attention-Focusing, Body Skills Training, Contingency Management, Distraction, Education, Empathy Expression, Environmental Change, Externalize Feelings and Thoughts, Empathy expression, Exposure, Goal Planning and Attainment, Homework, Interpersonal Skills Training, Modeling, Reframing, Rehearsal and Role Play, and Therapist's Self-Instruction.

The above domains seem to concisely capture most therapy actions in clinical practice. A procedure's domain profile appears to characterise it meaningfully. A pilot analysis by students of inter-rater reliability for the presence or absence of domains in ten

procedures was encouraging and served as a teaching aid for them. Therapists in general might find the use of such domains a convenient shorthand to convey what they do.

Much more work is needed to refine the domains and their definitions as brief empirical descriptions appear of more procedures, and in the light of further reliability analyses, process and outcome research, and other insights. Some researchers might find more value with different empirical domains. Perhaps some of the 16 domains should be melded and other domains added.

Some of the domains deserve subdomains. For example, Homework (HW) might be divided into the types of activities which therapists may encourage patients to do outside sessions such as diary keeping, exposure, body exercises like muscle relaxation and slow deep breathing, and changing aspects of the environment. A second example is that Externalise Feelings and Thoughts (EFT) might be differentiated into whether they are the dominant feature as in non-directive *Free Association* or just one aspect of a broader profile of more and more-directive domains as in *Anger Management.*

The classification of procedures might be modified by studying two types of coherence of domains - the frequency with which the same two, three, or more domains appear: a) at least once somewhere within an entire entry; b) in the very same small part of an entry. Finding such coherent clusters of domains may yield clues to logical groupings of procedures. For example, *Free Association* (EFT,Ref) and *Life Review Therapy* (EFT,Ref) share the same two domains, and feature no other domains. They have the same domain profile and seem closer to one another than to two other procedures which each feature three domains (*Harm Reduction* - Edu,GPA, IST- and *Interpreting Defenses*-Emp,EFT,Ref-) but share none of those three domains and intuitively seem to belong to different groups of procedures. In contrast, *Interpreting Defenses*, *Free Association* and

Life Review Therapy all feature EFT and Ref and seem more related to one another than to *Harm Reduction* which doesn't. Higher- and lower-order factors by which to classify procedures could emerge from formal factor and Nvivo analyses.

A procedure might be characterised not only by its domain profile (all the domains it features) but also by the order in which those domains appear during a session. When Edu features at all, it seems to appear more frequently at the start of a procedure when a rationale is given, and perhaps at its end when relapse prevention is planned, than during its middle. An idle association is that genetic DNA codes consist of long trains of 4 nucleotides in crucially-distinct sequences wherein a single error may be fatal for the organism. How much domain orders are important in a procedure remains to be seen.

Domain presence is another matter. A procedure's efficacy for particular problems may well require the presence of certain domains. An example is that anxiety disorders improve mostly with procedures which contain Exp or Ref and HW (Marks 2002). In contrast, the efficacy of numerous if not most procedures appears to be enhanced by the presence of certain other domains e.g. Emp and CM.

Common factors like Emp and CM are widely emphasized in the literature. Therapists who empathise with clients and praise them for desirable behavior tend to improve them more, provided they use procedures effective for the clients' problems. This phenomenon is not unique to psychotherapy. Emp and CM probably also improve outcomes of consultations with accountants, architects, lawyers and priests, provided those professionals apply appropriate expertise to the matter in hand. However, there are limits to such enhancement. In any procedure for an anxiety disorder, no matter how much Emp and CM is present, their effect is small unless that procedure includes Exp or Ref.

Many authors (op.cit.) have teased out procedures present in various therapies and grouped them into categories resembling some of our domains. Their work differed somewhat from ours in that they mainly unraveled procedures and grouped those to compare CB and PI approaches and to seek predictors of outcome. The broader base of procedures described in the clp website has revealed even more therapy domains, transcending traditional theories. They might enhance our ability to predict outcome.

Conclusions

Psychotherapy could evolve faster into a science if it classified its procedures into empirical domains which were generally applicable. It seems feasible to use a shared language to describe therapists' actions regardless of their orientation. We sketch a preliminary framework for doing this which needs far more work and testing.

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TABLE 1: *Provisional list and definitions of 16 domains*

Domain	Definition
AF Attention-Focusing	attend to and accept external stimuli or one's own thoughts, sensations, and feelings.
BST Body Skills Training	train to monitor and change habits and sensations.
CM Contingency Management[1]	appropriately reward desired behavior and ignore or penalize undesired behavior
Dis Distraction[d]	divert attention from feelings, thoughts & images
Edu Education	formally explain what maintains a problem and how to overcome it.
Emp Empathy Expression[1]	express understanding and acceptance of another's feelings beyond usual rapport.
EC Environmental Change[1]	planned non-contingent change of the environment.
Exp Exposure	guide patients into facing frightening/avoided situations/feelings/imagery/thoughts.
EFT Externalize Feelings and Thoughts	Help patients uncover hidden feelings & thoughts
GPA Goal Planning and Attainment	help patients define problems and goals to reduce them, and steps to attain goals.
HW Homework	help patients plan to carry out and record tasks between sessions, in the natural environment.
IST Interpersonal Skills Training	train appropriate social behaviours.

Mod Modeling[1]	show clients what to do by watching it being done by the therapist or others or in a film, or by imagining themselves doing it.
Ref Reframing	help patients see things differently by discussion/written methods.
RRP Rehearsal and Role Play	rehearse imagined/actual behavior to improve skill in performing it or to understand it from one's own or another perspective.
TSI Therapist's Self-Instruction[1]	therapist uses own feeling, memo or action to help the patient.

[1] = distinct from all other domains.

TABLE 2: The 16 Domains seen in 23 of the 81 Procedures

	The 16 Domains*																
23 of 81 Procedures	AF	BST	CM	Dis	Edu	Emp	EC	Exp	EFT	GPA	HW	IST	Mod	Ref	RRP	TSI	Domains in proced[a]
Anger Management	AF	BST			Edu			Exp	EFT	GPA	HW	IST	Mod	Ref	RRP		11
Attention Training	AF				Edu			Exp			HW						4
Countertransference						Emp			EFT							TSI	3
Use																	
Decisional Balance					Edu				EFT								2
Family Work			CM		Edu		EC			GPA		IST		Ref			6
Schizop																	
Fixed-Role Therapy											HW	IST		Ref	RRP		4
Free Association									EFT					Ref			2
Habit Reversal	AF	BST	CM		Edu		EC		EFT		HW		Mod		RRP		9

Imagery Rehearsal				Dis									Ref	RRP		3
Interpersonal Therap					Edu		EC		EFT			IST	Mod		RRP		6
Life-Review Therapy									EFT					Ref			2
Linking														Ref			1
Relationships																	
Morita Therapy	AF		CM		Edu		EC	Exp		GPA	HW			Ref			8
Nidotherapy							EC			GPA							2
Problem Solving			CM		Edu		EC		EFT	GPA	HW	IST		Ref	RRP		9
Prolonged Expos CC				Dis				Exp			HW						3
Promoting Resilience		BST	CM		Edu	Emp	EC	Exp		GPA	HW	IST	Mod	Ref	RRP		12
Reciprocal Role Proc									EFT		HW	IST		Ref		TSI	5
Repairing Rupture						Emp			EFT							TSI	3
Socratic Questioning										GPA				Ref			2
Stimu Control Worry	AF			Dis				Exp	EFT	GPA	HW						6
Validate Feelings						Emp											1

Well-Being Therapy									EFT		HW			Ref			3
Procedures in Domain	26	14	22	5	32	20	19	29	45	33	42	24	16	40	28	7	

Note. *AF = Attention-Focusing; BST = Body Skills Training; CM = Contingency Management; Dis = Distraction; Edu = Education; EC = Environmental Change; EFT = Externalize Feelings and Thoughts; Exp = Exposure; Emp = Empathy expression; GPA = Goal Planning and Attainment; HW HomeWork; IST = Interpersonal Skills Training; Mod = Modeling; Ref = Reframing; RRP = Rehearsal and Role Play; TSI = Therapist's Self-Instruction.

[a] = total number of Domains in the Procedure in that row; [b] = total number out of 81 procedures in which the Domain features

	Across 14 Domains mean % *(range)*	Across 10 Procedures mean % *(range)*
Among the four students:		
Rated presence and absence	91 *(80 - 100)*	91 *(84 – 98)*
Rated presence only	68 *(31 - 100)*	72 *(64 – 84)*
Between the four students and the two authors:		
Rated presence and absence	86 *(63 - 100)*	86 *(73 – 91)*
Rated presence only	82 *(38 - 100)*	78 *(53 – 91)*

TABLE 3: Percentage of agreement among raters for Domains in Procedures

APPENDIX A: *Illustration of 1, 6, and 12 domains detected across three procedures*

Just one domain present: In the procedure *Linking Current, Past & Transference Relationships*: Single domain – Reframe. The 15 other domains seem absent.

Extract: 'The therapist seeks common factors across the 'triangle of person' across: a) current relationship difficulties, b) earlier relationships, especially with parents, and c) how s/he relates to the therapist (transference). The therapist then interprets such links, often along one or other "side" of the "triangle" (e.g. link of significant others to therapist: *"Your descriptions of tentative connections with your boyfriends remind me of the cautious way in which you approach me"* '

Six domains present: In the procedure *Acceptance*: Attention Focus, Body Skills Training, Education, Exposure, Homework, and Reframe. The remaining ten domains seem to be absent.

Extract: 'Training a willingness to experience thoughts, feelings, and bodily sensations without trying to avoid or change them (AF,BST,Exp).Discuss costs in the client's life of non-acceptance e.g. from harmful avoidance such as procrastination or drinking (Edu). Encourage contact with the present both within e.g. ask a client reluctant to feel anxiety during pursuit of a valued relationship to allow each sensation felt when frightened to remain as it is (BST,Exp) and regard thoughts about those feelings as just thoughts or words(Ref), and without i.e. be mindful of and accept external cues encountered (AF,Exp,Ref) while pursuing a value that elicits anxiety. Clients are encouraged to practise acceptance when distressing experiences impede engagement in valued action (Exp,HW).'

Fully 12 domains present: In the procedure *Promoting Resilience (Social/Emotional Competence) in Young Children:* Body Skills Training, Contingency Management, Education, Empathy Expression, Environment Control, Exposure, Goal Planning & Attainment, Homework, Interpersonal Skills Training, Modelling, Reframe, Rehearsal & Role Play. (Only four domains absent: Attention Focus, Distraction, Externalize Feelings & Thoughts, Therapist's Self-Instruction).

Extract*:* Teach children in role-play games to detect and react to other people's feelings during interaction with them: Make eye contact, smile, speak confidently, share (Edu, Emp, IST, RRP). ...Encourage helpful green thoughts rather than unhelpful red ones (Ref). Promote support networks of people with whom to share love and emulate their good qualities e.g. a brave and helpful older sibling (EC) ...Have each child draw themselves together on the same poster-sized paper. To show them how to do it, the facilitator also draws him/herself onto the same collage (Mod). `…*say what people in magazine pictures are feeling (Edu, Emp)'* ...Sense and react to body clues (breathing rate, muscle tension), and self-soothe by slow deep breathing, progressive muscle relaxation (BST) … Help the children work with parents (EC) to set realistic goals and plan small manageable steps to attain those goals (GPA), in graded exposure hierarchies to conquer fears (e.g. of the dark (Exp, HW)… Parents attend to help their child maintain and generalize skills across many settings (EC, HW) …The therapist contacted Sally's teacher to offer new rewards to promote independent behavior e.g. reward chart using stickers, sitting in the special helper chair as a reward for positive behavior (EC, CM)

APPENDIX B: TABLE B1 *Ambiguities the four student raters encountered when more than one Domain appeared in the same part of a clp entry* (they found no ambiguities when rating 2 of the 10 entries - *Countertransference Use and Fixed-Role Therapy)*

DOMAINS	Identifying sentence in the entry	*Procedure*
AF[a], EFT[b]	"Focus on feelings and thoughts…"	*Decisonal Balance*
AF, Exp[c]	"encouraged to accept the pain"	*Guided Mourning*
AF, Exp	"advides to accept the thought, not avoid it"	*Mindfulness Training*
AF, BST[d], GPA[e]	"with that goal in mind are you willing to stay with your sense of shame"	*Acceptance*
Edu[f], Ref[g]	"discuss costs in the client's life of non-acceptance"	*Acceptance*
Edu, Ref	"clients are taught to recognise costs..."	*Anger Management*
Edu, Mod[h], Ref	"was shown a video on people touching pets.."	*Danger Ideation Reduc*
IST[i], RRP[j]	"neutral rehearsal of social-skills activities..."	*Behavioral Activation*
Mod, RRP	"Therapist showed & rehearsed with Sandy…"	*Anger Management*
Mod, RRP	"therapist said `milk-milk-milk…' and then asked the client to do this"	*Cognitive Defusion*
Mod, RRP	"Imagine you did decide to start doing ..."	*Decisional Balance*

Note. [a]AF = Attention-Focusing; [b]EFT = Externalize Feelings and Thoughts; [c]Exp = Exposure Training; [d]BST = Body Skills Training; [e]GPA = Goal Planning and Attainment; [f]Edu = Education; [g]Ref = Reframing; [h]Mod = Modeling; [i]IST = Interpersonal Skills Training; [j]RRP = Rehearsal and Role Play.

APPENDIX C: TABLE C1 *Seven domains that map onto action-categories in the literature*

Domain	Current definition	ITS[a] (Gaston & Ring, 1992)	CSTF[b] (Goldfried et al., 1997)	Blagys & Hilsenroth (2002)
Externalize Feelings & Thoughts	help patients uncover hidden feelings & thoughts	explore patient's defenses, emotions and cognitions toward therapist, others, self, and non-interpersonal situations; encourage patient to self-disclose or self-reflect	categories covering focus on patient's feelings/thoughts/ actions that hinder progress; future wish, desire, motivation or need; subjective view of others; appraisal of self-worth	emphasise inner impulses, conflicts, wishes, expectations, fantasies;
Reframe	help patients see things differently by discussion/ written methods	offer alternative solutions to problematic situations	help patient step out of his/her subjective perception and view things more objectively	challenge & modify patient's irrational or illogical beliefs;
Education	formally explain what maintains a problem and how to overcome it	address patient's problematic contribution to the task; give strategies for solving interpersonal problems	very relevant external circumstances and patient's repeated interpersonal functioning and its impacts on another component & on another person, and vice versa; compare patient's functioning with that of another person; give relevant general knowledge and reassure; point to patient's options	inform patients about their treatment, disorder, or symptoms
Contingency Management	appropriately reward desired behavior and ignore or penalize undesired behavior	seek patient's participating in setting therapy goals, reinforce patient's change or plan to change	None	none
Goal Planning &	help patients define problems and goals to	seek patient's participating in setting therapy goals;	None	none

Attainment	reduce them, and steps to attain goals	reinforce patient's change or plan to change		
Rehearsal & Role Play	rehearse imagined/ actual behavior to improve skill in performing it or to understand it from one's own or another perspective	None	patient's performance of specific behaviors	teach skills to cope with symptoms & problems - ''do this'', ''try that''
Homework	help patient plan to carry out and record tasks between sessions, in the natural environment	None	encourage patient to act/think/feel between sessions	suggest activities between sessions: observation, written/ verbal/thought/behavior exercise

Note. [a]ITS = inventory of therapeutic strategies; [b]CSTF = coding system of therapeutic focus;

Manuscript pages for tables