



The Eight Patterns Of Humour

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The Eight Patterns Of Humour

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This paper is intended to provide a discussion of the different patterns that are recognized by the faculty of humour, as first presented in *The Pattern Recognition Theory of Humour: An Introduction*. It is not intended as a primer to the theory and consequently many aspects that are central to its integrity are not addressed herein. More detailed discussion of pattern definition and all remaining aspects is available in the *Complete Edition*.

The ideas and information presented in this book and its associated volumes are based on the observation of many thousands of instances of humour. Statistical analysis of this research is presented elsewhere. For further information please see *Resources*.

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Foreword

Surprisingly, the faculty of humour is continually active. It is less a source of jocularity than a stimulant to cognitive activity; less a distracting moment in which an individual attempts to think of something amusing to say and more the process by which the species is able to think and speak at all.

It is consequently vital to its study that the entire range of stimuli is assessed, not just the neatly packaged events of comedy. In the absence of intentional entertainment, that which occurs during social interaction or elsewhere in everyday life represents the bulk of that at which we laugh, and excluding it from analysis is a little like throwing out the bacon to eat the rind. Explaining away this immense incidence of humorous events as the product of a different faculty or the result of social dynamics significantly reduces the scope and accuracy of our study, and perpetuates the artificial fissures that have retarded academic research for decades.

Patterns are simple things constructed from any information, and this has done much to compound the confusion. Since humour is effectively an information-processing system, it is consequently applicable to any data, whether externally perceived or internally stored. Having recognized this, and having identified the details of what it is the brain wishes to process, a genuinely universal explanation of the system has been facilitated, a substantial proportion of the mechanistic detail of which is presented here.

Knowledge of this structure has revealed some interesting things about past research, informing us that certain overlooked theories (such as Bergsonian roboticism) have proven less incorrect than previously

imagined, and certainly no more incorrect than many more commonly supported interpretations. One of the most palatable aspects of this theory is that, while denying all previous theories, it also unites them for the first time. Previous attempts at unification have failed since they have relied on combining smaller theories into a larger whole, quoting multiple mechanisms and functions as the basis of humour, rather than analysing their common elements and synthesizing a new interpretation with global relevance. The need to examine certain pockets of humour based on arbitrary divisions of stylistic or thematic determination has passed because of a single overarching concept present in all of them. The faculty can now, for the first time, be studied as a whole.

Theorizing on matters of such scope can lead to time spent in dark corners and blind alleys, whether of one's own or of others' making. In *Eight Patterns* I have taken the liberty of freeing myself from arguing against the work of fellow researchers to concentrate on describing what I have found to be the case. While the theory exhibits a counter-intuitive tendency that makes it appealing to some and an anathema to others, I hope the increased definition provided by this second volume will begin to reveal its logical and analytical depth. At its centre is a deceptively simple system to which I hope I have done justice, and it is perhaps this simplicity, coupled with the immense importance of the faculty, that makes the theory appear far-fetched to some. *Pattern recognition theory* is not so much a system for humour as a system for human intellect since they are, at the profoundest level of their mechanisms, one and the same thing.

There are still many who are sceptical, which is only to be expected in the light of such claims. I can only ask to be excused for not appearing more tentative in my argument but to pretend there was any doubt in my mind or to give credence to incorrect alternatives would be nonsensical, whatever protocol might suggest to the contrary. This book will, I hope, go a little further towards substantiating my case.

Where the first volume of *The Pattern Recognition Theory of Humour* was an introductory sketch, this book begins to fill in the detail of the patterns and their mechanistic networks, addressing their formation and logical basis, and providing a brief examination of the process of recognition and the evolutionary function of each. While the nature of the patterns is of major

importance it is one of several broad areas of the theory and should not be mistaken for the entirety. Although the many related aspects of humour are addressed elsewhere, I have done my best to make this volume accessible to those approaching the theory for the first time, and no backwards referentiality should be required. I also hope the *Resources* section, in which 100 different stimuli to humour are defined and explained in terms of their associated pattern constituents, will become a well-thumbed chapter in this second short volume.

There is, of course, much more to come.

Alastair Clarke
February 2009

Materials

The Generality Of Patterns

The potential incidence of humour is unrestricted, either in frequency or by stimulus. It may occur anywhere, from any matter, as often as the individual is able to recognize the patterns to engender it. The faculty responsible for this amusement has accelerated the perceptual and intellectual capacities of the species by promoting the apprehension and manipulation of information, and is consequently equipped to accommodate any form of stimulus, whether entity, property or event, scouring it for points of interest to which the conscious mind is then alerted through the humorous response. We may find anything funny at any time, and whenever we do so it is the result of exactly the same simple process, one whose economy and scope are unparalleled.

Underpinning this system are just eight patterns, the recognition of which has produced all the humour that has ever been imagined or expressed, regardless of civilization, culture or individual taste. As a component of the faculty the pattern forms the smallest possible active unit and while many instances of humour employ multiple patterns, each of the eight regularly appears in isolation. As a consequence each is considered a fundamental element of humour in its own right, whether apprehended individually or in combination.

It is these patterns that provide the system with its remarkable

versatility. The possible permutations of their combination produce a potentially limitless range of effects, and since they rely on relationships of information rather than content for their construction, their recognition forms a faculty identical in all members of the species regardless of cultural influence. While the majority of instances of humour exhibit three or fewer, there is no theoretical ceiling to the number of patterns recognizable within a stimulus since multiple instances of the same pattern may be apprehended in different media or alternative aspects of the same material. However, the subjective nature of pattern recognition makes it impossible to predict how many patterns an individual will in fact recognize within a certain stimulus. As a result it is more accurate to refer to patterns as existing only *on recognition* rather than inherently within the material under analysis, and the patterns we identify as students of humour are more accurately referred to as *potential sources* rather than *objective causes* of humour, which may or may not be recognized by another individual or the same individual at a different time.

Despite the subjective nature of responses, the same eight generic patterns provide the framework of the humorous mechanism and do so for precise cognitive and evolutionary reasons. The unified causality identified by *pattern recognition theory* informs us that humour is a fundamental faculty too wide in range and important in application to be explained by the appreciation or analysis of comedy alone. Whether laughing at the coincidences two individuals discover in their biographical details or the facial expression a friend uses during conversation, giggling at an ineptly drawn diagram during class or the excessive solemnity at an unimportant event, chuckling at astute observations previously unrecognized or guffawing at a prank that gives a colleague or friend a well deserved fright, the individual's amusement is stimulated by the activity of precisely the same faculty, reacting in precisely the same way, in every case examined. Since we are concerned here with the process of apprehension of all information, a consequence of the theory is a reintegration of all sources of amusement and all causes of laughter, revealing a far greater faculty than the apparently light-hearted world of comedy might imply.

By examining humour through patterns the universality of the system soon becomes apparent. Its mechanistic detail also informs us of the foundations for prior theories and why researchers have been beguiled into convictions that certain types of humour or aspects of the human condition have held the key to the nature of the phenomenon. While the theory denies that any previous interpretation presents either the precise mechanism or the correct function of humour, all major theories of the last century are accommodated

by its basic tenets. No prior theory is global, yet the phenomena described by those based on superiority and anti-dominance, anomaly, incongruity, mock aggression or acting in jest, Bergsonian roboticism, social dynamics and countless other interpretations and mini-theories are simply and neatly explained by the one unifying concept of pattern recognition.

Unfortunately it is not possible to uproot an instance of humour previously explained by any such theory and translate its prior interpretation directly into pattern formation. At worst such an approach will actively confound interpretation and at best it will prove inaccurate. *Pattern recognition theory*, while explaining many other theories, is not interchangeable with them at the point of analysis. The stimuli must be reassessed in full, in detail, and individually.

There is caution required in such analysis. Generic patterns provide frameworks for specific content of any variety, subject or format, yet for the faculty of humour there is no value in any matter but the pattern itself, the simple repetition of any unit of information, and it is here that clarity is required. Such simple echoes, unconsciously recognized beneath culturally determined information, along with the humorous response as a major motivating reward, have functioned as a perceptual and analytical accelerator for the human brain, responsible for the evolution of its unique intellectual capacities.

Information

Humour is a system for information processing, far simpler in composition yet more advanced in scope than the closest artificial comparatives. The major component of the system is the pattern and the basic material for its construction is any information available to the human brain, in any medium or combination of media. All information is of equal weight regardless of the subject matter or the nature of the material, and is assessed therefore as unbiased *units*. The content that supports those units, the material of the stimulus consciously perceived and traditionally examined for the elusive factor of humorous causality, has no bearing on its activity and should be discarded from our minds before we continue.

Since all information is awarded equal weight in humour every bit is processed identically regardless of provenance. Whether the information is perceived as an external event or supplied internally by the memory or imagination of the individual, it is apprehended in equal units with equal potential to contribute to the construction of a pattern. All bits of information received by the brain are scanned for their unitary relationships and those exhibiting levels of repetition may be recognized as patterns. Without exception, the generic pattern structure is identifiable in all information evoking humour.

Analysis of humour therefore requires the ability to separate the cultural content traditionally considered the stimulus from the interactional structures of unitary information behind it. Since it is not the content of this information but its structure that is active in humour, the faculty is also concerned with the unit's relationship to the *context* in which it arises. One of two simple relationships is potentially identified between the unit and the context, resulting in the allocation of the information to one of three channels: one default in which no pattern is recognized (in which information is allowed to continue unhindered); one type one (in which units are assessed for *fidelity*); and one type two (in which contexts are assessed for *magnitude*). As a simple network system the channelling process forms the second major component of the system to complement that of the pattern.

The impartiality of unitary information is of major importance to a comprehension of the activity of the faculty of humour. Content has no impact on the mechanism in that no subject, concept, entity or property possesses an inherent quality that makes it amusing. Without content there can be no pattern, yet once that content exists, the pattern is the level at which humour operates, at which it exercises its process of recognition,

and for which it delivers its rewards. Liberated from the thematic study of the material in which humour arises, the study of humour now exists in the analysis of perceptual relationships.

Patterns therefore form unconscious, impartial frameworks onto which local material is projected but they can only be recognized by an individual if appropriate knowledge is possessed to facilitate their apprehension. Humour is a fundamental facet of human intellect and while its cognitive framework remains the same within every individual, the manifestation of that framework's activity, the information projected onto it, is malleable and susceptible to all the usual cultural and individual influences of any intellectual activity. Consequently the individual's tastes, experiences, perceptions and other retained information will affect their tendency or ability to recognize patterns in material presented to them, yet the pattern mechanism behind that content and the nature of the unitary information undergoing analysis remains the same within every human being, regardless of cultural influences.

Content is thus a facilitator rather than a component of humour, enabling rather than causing the individual's responses. While popular interpretations of humour maintain that some forms are cerebral (such as political satire) and others crude or even juvenile (such as slapstick or scatological humour), it is important to note that the apprehension and absorption of patterns, the mechanism behind all humour, is identical in all cases. The difference in our perceptions of their cultural value arises because of the unconscious nature of pattern recognition. Since we are unaware of the pattern mechanism, our judgement of the humour's value is based entirely on the content as we apprehend it intellectually, content which, in itself, has no effect on the extent to which we are amused but which will be judged consciously for its merit on other criteria. The eight patterns of humour, however, can be neither high nor low, and the same patterns appear across different formats and different media, readily combining with each other to create an apparently limitless range of analytical and manipulative possibilities. Indeed, the strength and variety of permutations, when further compounded by their appearance across different media and formats of humour, have done much to confound previous attempts at identification of the mechanism of humour, as has the unconscious nature of pattern recognition, which is swift, unlaboured, and involuntary.

Humour is thus the apprehension of unitary information in certain relationships. The basic absorption of units is sufficiently individualistic to lead to differing apprehensions from person to person and instance to instance, varying responses to apparently the same information. It is

impossible to state that the same patterns will be consistently evoked by the same type of humour or even the same specific stimulus. Even the same person, experiencing the same information for a second time, may recognize alternative patterns depending on their perception of the information's presentation, their emotional relationships to the people and subjects involved, and their neurophysiological or psychological states. While this is true, human cognition at fundamental levels is a standard process across the species, and faced with the same information similar patterns will tend to be recognized by multiple individuals. There, however, lies the problem, since the nature of information changes depending on subjective perception, and what appears to be the same information shared by multiple individuals rarely is. While the system may be stable, individuals are not, and it is the faculty's accommodation of this dichotomy that makes it so powerful as an individualistic information processor.

Since it can be stimulated by any information the number of different types of humour we can identify is potentially limitless, and not restricted to deliberate attempts to amuse. Many of those listed here and in the *Complete Edition* will not be popularly recognized formats, which I refer to as *formal humour*, but quotidian occurrences in which the evocation of the humorous faculty is common. *Informal humour* is much more frequent than its performance-related cousin, and its commonly occurring types deserve attention and categorization in their own right.

Discrete Recognition

A fundamental condition of pattern recognition is the apprehension of multiple terms in *discrete* recognition. Simply put, a pattern is a sequence of two or more stages in which the individual identifies some level of repetition, and the eight types identified in this document reflect the manner in which that repetition is effected. The majority of patterns consist of two terms only, a simple repetitive echo from one unit to the next, yet patterns may continue by the addition of further units to any number of terms. Importantly, however, at least two stages must exist in clear separation for a pattern to be formed.

While this may appear an obvious stipulation, defining where one unit ends and the next one begins is an ancient problem not without its implications for the analysis of humour. Since multiple stages must be apprehended before a pattern may be formed, certain basic facets of perception will affect the possibility of recognition.

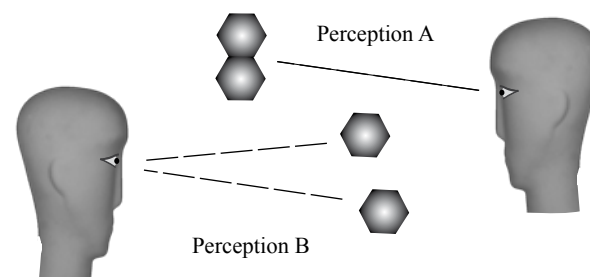


Figure 1: In perception A the individual's perspective produces an interpretation of the stimuli such that there is only one unit apprehended. An alteration in perspective in perception B, however, produces a variant interpretation whereby two distinct units are perceived in the same material.

In all cases (as with all aspects of patterns), the recognition of the discrete status of two bits of information is subjective. For whatever reason perceptual or conceptual, the individual may apprehend the stimuli as possessing singular or multiple identities. Doing so, in addition to determining at times whether a pattern may be recognized at all, may produce wide-

ranging effects for the manner of response evoked by the unitary information, as will be discussed later in the volume.

Importantly, the presentation of multiple similar bits of information is insufficient to warrant recognition as a pattern if there is an absence of unitary differentiation, and as a consequence many textures and visual backgrounds that might be classified as patterns for other purposes will not be recognized as such by the faculty of humour. The processing of information in discrete recognition also requires clarity of separation of the multiple terms. If there is insufficient distinction perceived between the pockets of information the brain may apprehend a configuration of bits as a single texture or an environmental background as opposed to a multiplicity of separate units, and a pattern will not be formed. Textures are distinct from patterns in that they can not be broken down into a single unit that creates the whole when repeated, and to this extent are not strictly patterns at all. However, even some clearly defined patterns may not be apprehended as such if they cover large expanses of detailed repetition. As a cognitive economy, instead of apprehending every instance of the unit, the brain reapprehends the expanse as a background environment constituting one single unit. While the repetition of stripes on a zebra may be judged a pattern if each is apprehended as an individual unit and appears in a clear sequence through which to assess the level of repetition, the busy repetition of freckles may instead be identified either as a texture or a background. Even an expansive uniform pattern, such as a wallpaper, may be apprehended as a single unit if it is perceived as a background undivided into differentiated unitary allocations, constituting a single environment requiring a single set of rules and consequently no more than a single identity.

Discrete recognition becomes an important and subtle component of the faculty when information supplied by the mind of the individual contributes to the construction of a pattern. The simplest and most common method of pattern construction on an *internal and external basis* involves the provision of supplementary units by the individual's memory with which to compare immediate perceptions (see *Common Methods*), whereby the apprehension of the first externally perceived unit provokes the recollection of the second. Such constructs are only marginally different from the comparison of two external entities, and function in precisely the same manner. The same *discrete* recognition between the stage constructed of information received from external perceptions and that retained by the individual must be achieved for a pattern to exist. The image of a dog may be compared with another from the individual's memory, or the dog may resemble some other animal or person the individual remembers. However,

in certain circumstances the simple process of apprehension of a single external unit may become fragmented. The resultant staggered recognition forms multiple stages, thereby enabling the simple perception of a single entity to produce a two-term pattern.

In the vast majority of perceptions the internal representation produced by the mind and the external entity apprehended are considered to be one and the same thing, producing an illusion of fluidity. There is, consequently, only one unit available for pattern construction when an individual perceives a dog, not the external entity (the dog) as well as its internal representation (the brain's interpretation of that information). This *direct* recognition, where the illusion of fluidity during the process of perception prevents a clear separation between the external entity and its cognitive interpretation, does not meet the necessary conditions for humour in patterns constructed

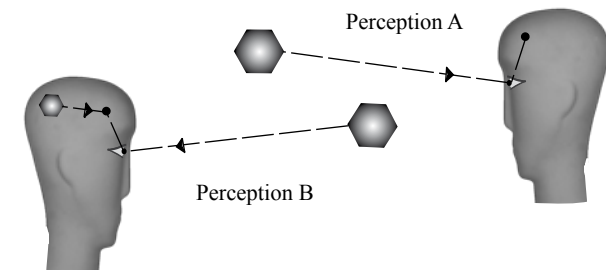


Figure 2: In perception A only one unit is apprehended and consequently a pattern can not be formed. In perception B, however, the mind of the individual provides a secondary image, whether a simple memory or prediction evoked by the external unit or, less commonly, a staggered recognition or echo of the external information due to a fragmentation of the illusion of perceptual fluidity, and consequently a pattern may be formed.

Whether considered an illusion or not, direct recognition is an important factor in the perceptual experience of consciousness, whereby, as seen in perception A, there appears to be a fluid process of apprehension of the external unit by the internal mind, such that the external entity and its perceptual representation appear indivisible. However, should the illusion of fluidity be broken, or a separate image be called to mind by the individual for

whatever reason, multiple units may be formed in discrete recognition as in perception B. A process of conscious self-monitoring, as may occur during pronouncement or other activity during social interaction, may produce just such a fragmentation. Elsewhere, provided unitary separation occurs, the individual may amuse themselves with their own thoughts or words in auto-humorous evocation at any point.

Language (in most cases of usage where familiarity has arisen) functions in a similar manner to non-linguistic perception regarding discrete recognition. The process by which language is apprehended, in which a single identity is perceived between the external object and its linguistic representation, will not evoke amusement in isolation of patterns within the content of the communication itself. However, if the philological tag (the word) becomes separated from its semantic interpretation (the meaning) by some factor perceptual or conceptual, discrete recognition may occur and humour be evoked by the simple apprehension of a word or other linguistic construct. The experience of observing the majority of representational art will not evoke humour for the same reason. Abstract art, while apparently escaping the constraints of direct communication usually then requires conscious analysis and laboured interpretation, failing different necessary conditions (see *Necessary Conditions Beyond Recognition*). Those apprehending abstract art in a less convoluted manner or those whose perceptions enforce a separation between externally perceived representational art and its internal representation may still identify a source of humour within the simple apprehension of the communication, and this dislocation is explicitly sought by many instances of formal humour, since, as well as occurring accidentally, it is possible for discreteness of recognition to be provoked or encouraged by the manner in which information is supplied to or perceived by the individual. If the recognition of the external stage is rendered apparently distinct from the mentally retained information (either by timing, delivery, originality of expression, the individual's disposition or any other number of factors or conditions), discrete recognition may be facilitated and a pattern formed. The recognition of discreteness between units continues to exist in the subjective perception of the individual, however, and while it may be suggested by external sources, it can not be caused.

The rule of discrete recognition, stating that information must exist in two distinct stages for a pattern to exist, is one of the central tenets of *pattern recognition theory*.

Units And Contexts

Once we have removed the content of the pattern what remains, devoid of cultural association, is a relationship of information. At its centre is the unit, which we may either put to a certain use or assess for its appropriateness for a variety of uses, and circling the unit and binding it to others is the context, the criterion by which we judge that appropriateness or the end to which we manipulate the unit selected for use. These two constructs, the unit and the context, are the factors of repetition within our multiple stages known as patterns.

Since there are only two major components of any such relationship, these vital structures lend themselves to concise diagrammatization. Every instance of humour can be represented by a unit and context diagram of this type, describing the relationship of those two factors via one or more of the eight patterns. These diagrams are useful not only as a simple referential representation of each instance but also as an interpretative aid since their construction requires the precise identification of the components evoking humour. Accuracy in the construction of the diagrammatized representation is therefore important and certain rules must be followed to ensure the correct determination of their internal relationships. Before we can address them in detail, we'll need to discuss exactly what we mean by the all-important components known as units and contexts.

Comprising any information available to the human brain, whether entity, action or property, a unit is something we can act upon, that we can do something *to*. The determination of a unit's identity is of utmost importance to the mechanism of humour. Recognition of when the same unit arises is central to the apprehension of pattern types and forces, and for this reason a necessary property of the unit is the exhibition of a clear identity. This identity must persist through any change of context that might be forced upon it, any difference of action we effect on it or alteration in the end to which it is put. Identity as it applies to matters of units and contexts relates to the persistence of a specific single unit, the definition of the underlying information, and not to its superficial manifestation. We may alter the properties of the unit but if it remains the same underlying unit, it is said to retain its identity. Yet again, the identification of units is subjective and may fluctuate depending on perception.

Related to the unit is the context, of which there are two types, both connected by the important characteristic of *non-utility*. Unlike the unit, neither form of context may be used by the individual. Where a unit may be

acted on or applied to a certain end, the context is a state engendered by that action, and can not exist in isolation.

The first type of context, the *comparative* context, exists as a criterion by which comparison is undertaken between multiple units. When two entities are compared their common properties are identified and it is these shared properties that form the context. A single comparative context is therefore identified as being shared by each unit exhibiting similarity. Indeed, such contexts are the binding connection, the fundamental repetitions, that occur between the all-important units. It is only in fact by the existence of such common contexts, these floating properties, that it is possible to recognize similarity between two units at all. Such contexts may be wide (as in 'visual appearance') or narrow (as in 'jaggedness of silhouette' or 'depth of green hue') depending upon both our perceptions and the purposes of our comparison. They may, in fact, be anything at all, with the sole qualification that they must be judged by the brain to exist in both units under assessment. This distinction is important since the context is not a neutral, independent scale existing in isolation of the units being compared. The context is only engendered by the individual's (unconscious) action of comparison, and refers to the presence of a property, not its potential. Independent scales would permit the absolute absence of the property from one unit (returning a minimum value) yet its absolute presence in another (returning a maximum value), which is not permitted by the unit and context relationships of humour. Rather than comparing two units in this approximate sense of the word we are strictly *drawing comparisons* between them. The context has already been judged to exist between the two units, to bind them together in similarity. As will be discussed later, however, this does not mean that the context must necessarily be present in each unit to the same extent, and it is the assessment of this level of similarity that we will soon observe forming one of the two fundamental processes of humorous analysis.

The nature of comparative contexts is only restricted by the individual's perception of connecting properties. A brief examination of the diagrams in this volume reveals various forms of comparative context including *visual appearance* (with various finer definitions), *behaviour*, *colour: blue*, *biographical history* and *experiential sensation*. The comparative context for two individuals with similar-looking faces could perhaps be judged to be *visual appearance: bone structure*, and for two similar-sounding words *phonic properties*.

The second form of context is *manipulative*. This represents the environment of our unit, the end to which we put it, an action we effect on it or a state in which that unit exists. While we can not act directly on a context,

we can alter the manipulative context by acting on the unit to which it refers. In all cases the context must exist in association with a unit and possesses no independent existence under any circumstances.

By manipulating the unit we may alter its interpretation, application, location, orientation, execution, properties or scale. These seven categories provide a guide for the range of manipulative contexts and will be discussed in much greater depth when the *patterns of magnitude* are described. We could therefore take our unit (in this example a motor car) and place it within two different locational contexts (such as London and New York, or a closet and a jungle)

and by doing so, while the context changes, the unit remains the same. If we then apply that same motor car to two different ends (such as using it as a vehicle or as a place of habitation) we further alter its context while its identity persists. Manipulative contexts are therefore specific examples of those seven different categories recognized in the activity of a unit.

There are consequently two types of context at the analyst's disposal with which to form a relationship with the central unit. In the first formation there are multiple units in a single context by which they are compared, whereas in the second the single unit is repeated through multiple contexts by which adaptation occurs:

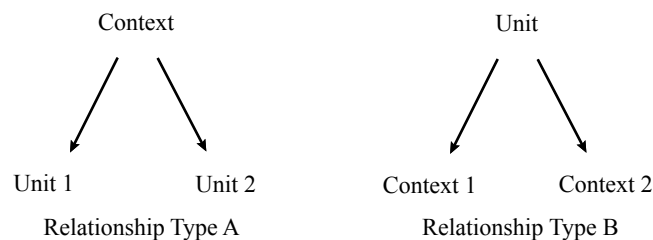


Figure 3: Relationship A exhibits two distinct units within a single comparative context, whereas relationship B exhibits the repetition of a single unit in altered circumstances. While these two diagrams may at first appear to represent simple contrary states this is an illusion, as will be discussed later in the volume.

The participant information presented at the apex of the triangular relationship must always be that which is repeated in both of the corners below, and functions as an anchor by which repetition is effected. The only location

we may place parties between which a degree of dissimilarity is exhibited is at the bottom of the triangle, where multiple items are displayed.

We may establish as many units as we wish in a context, or vice versa, but each stage of a pattern is a pattern in its own right, and may be represented or analysed on the basis of two terms only. If I make a sound and repeat it once a few moments later a pattern is formed independently, regardless of whether I then continue to repeat the sound to produce further stages and extend the pattern or not. Even if I do so, the second and third instances of the sound also form a pattern in their own right, as do the third and fourth and the fourth and fifth. This definition of the pattern may disappoint those who are keen for their existence to represent the importance of flamboyancy or complexity to the brain, yet the recognition of similarity in two terms is all that is required for complex intellectual activity. The pattern '1, 2, 7, 5, 9, 1, 2, 7, 5, 9' is composed of two terms only, each comprising five elements. Definitions from some graphic arts or branches of mathematics stating (for their own ease of use) that patterns require three terms are of no relevance to this theory, and just as frequently common usage of the word admits the existence of two terms only (such as in the recognition of a *pattern of behaviour* or in the use of a *pattern* as a template in textiles).

The analysis of patterns as two-term blocks has various advantages, the first of which is accuracy of definition. It also ensures that the stimulus is assessed not because it appears to constitute some form of commonly recognized humour but because it has elicited a response. Any two terms not eliciting humour to any degree are inactive and do not require assessment. However, while two-term analysis is the most accurate form we may, if we wish, represent a longer run of stages thus:

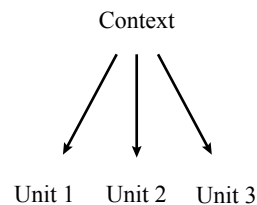


Figure 4: The triangular form of unit and context diagrams is employed for reasons of clarity and economy since any two-terms of a larger pattern must necessarily form a pattern independently of any other stages concomitant with them. Space-permitting, and presuming checks are carried out to ensure each stage is active in the evocation of humour, a different approach may be adopted.

Each triangular unit and context diagram therefore represents one stage of repetition, one simple two-term pattern, that evokes humour independently of any other stages. This is possible since there are always two terms available for analysis whether they are conterminous in the stimulus event or not.

We are now in a position to illustrate the unit and context relationship with some specifics. Starting with the example of a coffee cup on a table in a cafe, the cup has been identified as our unit for whatever reason and for our purposes the context, although not yet recognizable to the individual, will be locational. If I move the cup one inch to the right I am undertaking an action that is effected on the unit. Having done so you may well judge its location to have remained unchanged despite the minor alteration of placement. If I move it to the next table or onto the floor, however, you may consider its context to have changed, although you may still perceive it as present in the cafe and therefore locationally consistent. Accordingly, any two units next to each other are likely to be assessed as existing in the same location, unless the minor differences between them are subjectively judged to affect them materially. The identification of contexts and the point at which a new one is recognized is as subjective as the judgement of units. However, certain factors will influence it.

Replacing the first coffee cup on the centre of the table in front of us and adding a second and a third, observing them together a comparative context of visual appearance is recognized connecting all three. I then move one coffee cup six inches to the right of the other two. Having done so, however, it is now inside my bag. Taking one of the two remaining cups I move it nine inches from the centre in the other direction on the table. Despite the fact that this third cup is further from the central cup by three inches than the one inside my bag, both visible cups remain on the table and are therefore more likely to be judged to remain within the same context than the cup inside the bag. Regardless of the greater distances involved, cups one and three inhabit the same *material environment*. The second does not, and the different rules that now apply for that unit, the different information that is required in order to interact with it, means that new conditions prevail, and the cup is likely to be considered recontextualized.

Two similar looking coffee cups in one location therefore have one active context (the comparative by which they have been recognized to exhibit similarity) and multiple manipulative contexts of location, application, scale and so on. These contexts remain dormant while the individual's attention is not drawn to them, but the simple activity of relocation or reapplication of the unit forces the relevant context that has been manipulated to become active.

Units and contexts are therefore tightly defined, mutually exclusive forces, but there are no distinguishing intrinsic qualities by which they may be identified. Instead, they are defined by their relationships to each other, and an entity, property or activity that constitutes a unit in one analysis may become a context in another:

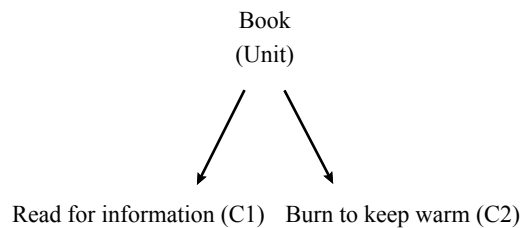


Figure 5: A simple unit and context diagram repeating the unit through different applications.

In this example the book (the unit) is thus applied to two different functions. However, we may now alter the focus of the individual's perception to the action of *reading for information* and consider it a unit thus:

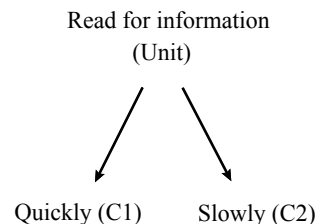


Figure 6: Context 1 from figure 5 now becomes a unit to be manipulated in a certain way, just as the unit of figure 5, the book, was manipulated also.

Since multiple executions are effected on the unit, multiple manipulative contexts are recognized for the action by which the book is read. The process by which the brain decides what to select as the unit or units in question

(and consequently what will constitute the relevant context or contexts) is affected by the manner in which the information is absorbed and subjective perceptions of generic and specific identities, as discussed in more detail later in the volume. The precise details of the different forms of manipulation and comparison that can then be effected are described by the eight patterns. However, while units and contexts may be directly exchanged in certain circumstances, this will not always be possible and its occurrence in instances of humour is infrequent. Knowledge that they may do so, however, is important for a correct comprehension of the constitution of the basic triangular diagrams that represent the structural relationships underlying all instances of humour.

This interchangeability of units and contexts is restricted in one very important respect. For logical reasons an instance of neither construct may be repeated within a relationship. The same constituent elements may produce an entirely different relationship if rearranged, but within the analysis of a static interaction, each unit and each context must be unique within the triangle. A unit can not be the same as the context by which it is being judged, and neither may it constitute the context into which it is manipulated.

So why should this be true? Since a context is an end to which we put a unit or a common property by which we compare it with another, a unit can not also be its own context (although it may form a context for a *different* unit). The book may be relocated to a new shelf, but that new location can not be the book itself. We can reorient the book or draw comparisons between its colour and that of another, but neither the colour nor the orientation, nor any application to which we put that book, can logically be the book itself.

In the case of comparative contexts, were we to define the book as the common property exhibited by the two items, one of which was the book itself, it follows that the second item must also be the book itself, and a redundant comparison has been established, since we are comparing a single unit with itself for likeness to itself. In fact, we can draw a comparison with no other unit on any other basis, and the process spirals into stagnation. An alternative context, identifying useful properties in other units that compare with those of the first unit is the only process by which to achieve a productive comparison, although it should be noted that this does not render the comparison of multiple identical units redundant; far from it, in fact, since perfect similarity of comparative contexts between multiples is one of the great attracting forces of unit and context relationships, as will become evident shortly.

While we are correct in asserting that any information can be used to form a triangular relationship as above, we will look briefly later at how there

must be a *viability* to both the units that are recognized and the contexts to which they are applied. Effectively what this amounts to is that some bits of information may be rejected as unacceptable and the process of recognition truncated, caused by a simple judgement of unfitness of the information to take that specific position within the specific unit and context relationship in question. The individual may, for example, draw comparisons between two trees by noticing their leafiness, but if one of them is not in fact a tree or does not exhibit leaves, the comparison may become redundant and be rejected. A tree may be reapplied as a place to live or as a heating system but if the individual judges either to fail the test of viability for the unit then rejection may once more occur. However, as discussed later, a patent lack of viability of a unit or context may alert the individual to different relationships formed around the error or ineptitude of the transmitter. Again, we are in the thrall of subjective perceptions.



We are now ready to set the forces of *fidelity* and *magnitude* to work on these two distinct relationship diagrams, defining the attraction between units and contexts that makes their interaction seek ever more extreme manifestations.

Construction

Common Methods

The eight patterns of humour are divided into two lots of four, comprising *patterns of fidelity* and *patterns of magnitude*. Their division marks an alteration in both the unit and context relationships discussed so far and the perceptual benefit they confer on the individual organism. They have been named in an attempt to combine transparency with accuracy, and while their separation may at first appear arbitrary there are clear reasons founded in both the processes of cognition they reflect and the incidence of their recognition for their definition as eight separate phenomena. In combination they form a simple system for the analysis and manipulation of the external world through the apprehension of units and the assessment of the contexts in which they are recognized.

Where information is the raw material from which patterns are constructed, there are various associated forms of apprehension that dictate minor alterations in the source and nature of that information from which construction occurs. Some of those sub-divisions are common to all or many of the patterns or to the separate groups of fidelity and magnitude. Once a major pattern type has been identified, its definition may be significantly refined by the addition of appropriate construction qualifications to its reference. The more precisely we can define the nature of the source the more accurate our analysis, and the more easily comprehensible and locatable the source will appear to fellow students. In *explicit internal and external positive repetition*,

the final tag informs us about the pattern type, positive repetition, while its qualifiers supply information regarding the process of recognition and the nature of the units apprehended within that structural relationship. By close definition of this type the analyst gains a more accurate understanding of the relationship that has been identified (and of any presumptions they may have made regarding its nature), and is accordingly better equipped to assess the likelihood of the pattern's recognition by the individual in question in the source material at hand.

The simplest form of construction involves the combination of patterns into a compounded formation. Compound patterns are apprehended simultaneously as the same source, whereas separate patterns occur in an unconnected fashion, at different moments or from clearly distinct stimuli. Compounds require no ulterior structural or thematic connection, and are extremely common in humour. However, rather than combining in the same instance, some patterns enable or engender others by their occurrence, whereby one leads directly to the recognition of another. A common form is where the recontextualization of a unit leads to the further recognition of its fidelity to a separate unit, by which the first pattern is necessary for the recognition of the second. *Completion* and *translation* regularly lead to ensuing patterns in this way.

The information being repeated in the pattern may also take either *implicit* or *explicit* forms. The implicit form is the meaning or implication behind the explicit manifestation, which need exhibit no repetition of any kind. For example, three different disapproving looks and sounds may be apprehended as three instances of disapproval, despite superficial dissimilarity to each other, and would consequently represent implicit repetition.

Units and contexts may also be apprehended on a *generic* or a *specific* basis. The generic form represents a type (such as the concept of a tree), whereas the specific refers to a particular example (a specific tree). While this is a simple distinction the definition of these types is important in the scanning process by which information is sorted and must be clearly understood. The comparison of units may therefore be undertaken between two generic units, two specific units or between one generic and one specific. In the latter the specific clothes a subject wears could be compared to a generic type, such that those worn by the individual's colleague could be compared to those perceived by the individual to be worn by Oktoberfesters or security guards. Returning to our coffee cup model from earlier we begin with three specific cups on the table again. By moving one of them to the floor and using a second as a hat, the individual may now judge the specific alteration in contexts to represent generic recontextualizations, since the new

context is identified not solely to constitute an application for that specific coffee cup but for coffee cups as a generic type. The recognition of the identity of a unit will require definition of its generic or specific status, and a failure to recognize which is which may lead to the incorrect interpretation of patterns.

As we've already seen, patterns may be composed of any information, whether externally perceived or internally remembered or imagined, and a pattern constructed from units originating in both is said to do so on an *internal and external* basis. An original expression that accurately reflects an idea the individual retains may just as well form a two-stage pattern as two similar-looking people externally perceived. The duality of stimuli is a common method of pattern construction and accounts for a great deal that is unique about an individual's sense of humour. Such activity functions in an identical manner to that of being amused by patterns formed entirely of externally perceived material, which itself occurs less frequently than may at first be presumed. The construction of units from internally retained information is frequent, ensuring humour is commonly evoked by a combination of the internal and the external, with information sourced from both the individual and the material they absorb, rather than a simple case of the individual being amused by the stimuli with which they are presented.

Prediction is a sub-form of internal and external pattern construction whereby a prediction is made by the individual which is later confirmed or presented in a new context. In fidelity this prediction is referred to as *predictively confirmatory*, in magnitude *predictively recontextualized*. Related to this is the recognition of pattern *cessation*. If the stages of an established pattern cease to arise, such as when the continuing repetition is predicted but fails to occur, the cessation may evoke humour. While we may posit that, since the recognition of patterns is of value to the individual the recognition of their cessation may be also, no such evolutionary interpretation is required to explain the reason for the humour, since the cessation provides its own pattern, whereby the initial repetition establishes a process that leads to the prediction (conscious or otherwise) of an ensuing stage, and its absence forms a simple *opposition*.

Having examined the materials and the methods by which we may construct them, we are now in a position to examine the nature of the patterns themselves.

Patterns Of Fidelity

The first four patterns are identified by their common factor of *fidelity*, by which we mean the similarity between two or more units. The recognition of similarity involves the identification of a connection between those units, a common property or cluster of properties expressed in both. While this connection may be composed of any quality or quantity, it provides the context, the stated criterion, by which all selected units are compared. We are therefore concerned in these patterns with multiple units connected by a comparative context.

The units being compared may constitute any form of information, either generic, specific, concrete or abstract. In the examples below the connection is *colour: blue*, the presence of which has been identified by the brain in each of the chosen units in both instances of recognition.

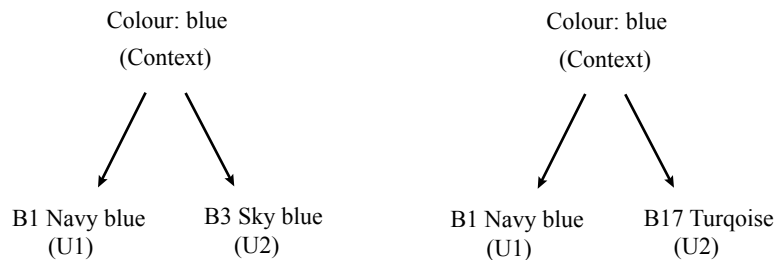


Figure 7: Two examples in which the individual is drawing comparisons between differently coloured tiles. The blues are numbered according to an arbitrary perception by the individual, but in neither case need that chosen as B1 represent an ideal of *blueness* since two units are simply being compared for similarity.

Other tiles perceived, including red, yellow and green, were not identified as exhibiting the common property shared by these four units, and were therefore not registered as similar. They were consequently default channelled by the scanning process and not selected for further analysis. Since the comparative context has been judged to exist in each unit as a group they will necessarily display a certain similarity (although with other forms of context or to other individuals this may not of course be externally

apprehensible). Once the brain has selected information it considers to exhibit similarity (above whatever subjective threshold may arise on an individualistic basis), the assessment of that similarity for its extent or *significance* determines the strength of the pattern as the faculty perceives it. While there are various factors affecting the degree to which an individual may be amused, we may measure a pattern's internal strength by the extent to which either fidelity or magnitude are assessed to be present, and this will directly affect the degree to which the individual is amused, all other factors remaining equal. The differing units in the two diagrams of figure 7 display varying degrees of fidelity in the comparative context of *colour: blue*. B3 exhibits greater fidelity to B1 than B17 to B1, and so we may be impressed by the comparison between B1 and B3 but less so between B1 and B17. In a third diagram, B3 to B17 would exhibit slightly greater significance of fidelity than B1 to B17 but still less than B1 to B3.

As here, fidelity need not be absolute for repetition to exist, provided the brain identifies some level of similarity. Once similarity has been recognized a pattern has been formed and the greater the fidelity is then assessed to be the stronger the pattern, and consequently, all other factors remaining equal, the more amusing the source of humour will be found. The perception of fidelity is, as with all other aspects of humour and as discussed in more detail later, subjective. An individual assessment considering B17 to resemble B1 more closely than B3 is no less valid to the faculty of humour than the interpretation provided above. What it means, however, is that the ends to which those similarities are put may have entirely different consequences.

Central to the concept of fidelity is, therefore, the comparison of multiple units in a single context, a relationship that will later undergo rearrangement in the concept of magnitude. This drawing of comparisons between multiple units dictates an attraction to similarity, and the greater the similarity identified within the repetition the greater the reward received. Returning to our units and contexts discussion, we can now apply this attractive force to the same multiple unit representation as seen in figure 8.

The force of fidelity therefore attempts to draw the two bottom corners of the triangle together. Since the closer these two points become the greater the significance of fidelity in the pattern, we could now view the two diagrams in figure 7 as exhibiting different proportions. The more etiolated the triangle, the greater the significance and the stronger the pattern. However, the assessment of significance is subjective, and consequently it can not be recorded on the unit and context diagram in an objective manner.

Multiplicity is vital to the concept of fidelity. The units may or may not exhibit absolute fidelity but as long as they are separate, multiple units and

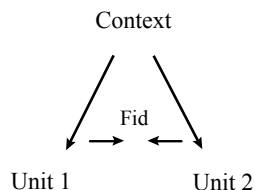


Figure 8: The triangular unit and context diagram representing fidelity exhibits two units compared within one context. The force of fidelity seeks the most significant similarity, and hence wishes the two units to return the closest possible values. Units 1 and 2 are therefore attracted to each other, and the more similar they become, the greater the fidelity and the more significant the pattern recognized.

not the same single unit repeated in different contexts, they are assessed for similarity. The perception of fidelity is therefore an assessment of precision in multiple units, a survey of similarity in multiplicity. While it will often therefore seem as if it is the unit which is being repeated in patterns of fidelity, on the strictest level it is the context that is repeated, since the identification of similarity in multiple units involves not their repetition but the repetition of the criterion connecting them. However, perfect fidelity involves absolute similarity and therefore equates, for all intents and purposes, to simple repetition of the unit. The context is not ours to manipulate (see *Recognition*), and consequently our attention is paid to acting on and comparing the units it connects. While repetition can only be recognized thanks to the presence of the singular comparative context, we can only effect it of our own volition by taking action to compare multiple units, not singular contexts.

A simple example of unit and context fidelity may be seen in the recognition of the similarity of sound in two different words, represented in figure 9.

The four general patterns of the category of fidelity are positive repetition, division, completion and translation, each based on the same underlying principle but different in construction. Individually they enable the system to recognize repetition in whole units, repetition in parts, absorption of the unit into a larger construct and translation into analogous forms in alternative media, and by identifying them the individual is being rewarded for recognizing the greatest possible similarity between multiple units. With the exception of positive repetition, the three remaining patterns of fidelity often require some level of reconstruction or interpretation of the information by

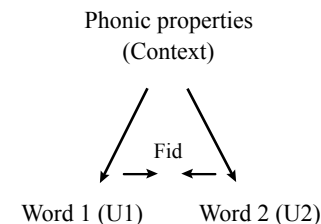


Figure 9: An example unit and context diagram representing a pattern of fidelity. This particular relationship of fidelity would be recognized as *positive repetition*, to be discussed shortly.

the individual, and this process seeks the greatest possible fidelity of the unsorted information to its constructed or translated comparative.

The activity of each pattern represents a rudimentary arithmetical process, namely multiplication, division, addition and conversion, and as a group they reflect the basic processes that can be effected on an individual unit without the alteration of its context. When we repeat the primary unit through any of these processes we are provided with an alternative with which to compare it. In patterns of fidelity it is this manner of presentation of the units (whether whole, divided, translated or incomplete) that determines which of the four is recognized, while their underlying similarity via the comparative context remains the basis of their construction.

It is important for an accurate comprehension of the mechanism to note that the alteration of the unit is not a necessary condition for the evocation of humour. Fidelity means just that, and the relationship exhibiting the greatest possible fidelity is between two identical units. As addressed later in the volume, the dissimilarity of multiple units is in fact of no importance to the faculty of humour for a whole host of cognitive and evolutionary reasons, and returns no humorous response under any circumstances. However, an illusion regarding the width of contexts through which single units can be repeated appears to make it so, as we will shortly discover.

Positive Repetition

The simplest and most common pattern of fidelity and by far the most frequent of all eight, positive repetition consists of no more than multiple units presented as complete entities within the same context. Effectively simple multiplication, it applies to anything that can be repeated and compared, whether entity, property or activity.

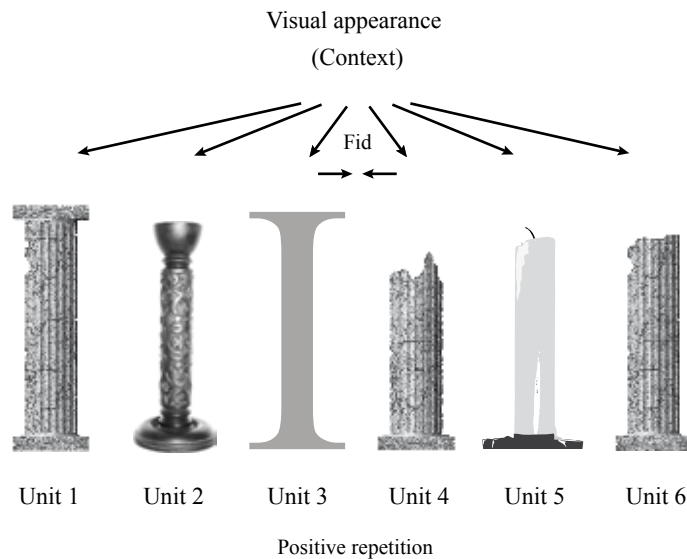


Figure 10: A multiple-unit representation of positive repetition. Exact replication is not a necessary facet of such patterns.

In the example presented in figure 10 the established context is *visual appearance*, by which criterion the brain has judged the six units to exhibit a similarity. The degree of recognized fidelity may fluctuate, even to the point that any similarity is substantially degraded, but as long as the process of unitary comparison recognizes that the units all exhibit the same property the identification of positive repetition is possible. Literal repetition of the primary unit (the full column) is not a prerequisite for the recognition of such a pattern. Should other items, such as the roman numeral (unit 3), sufficiently fulfil the requirements of the comparative context to simulate

multiplication, positive repetition will still be recognized despite the fact that the two entities are unrelated in all aspects except the comparative context.

Since it is this comparative context that has been repeated in each of the units rather than the units themselves, the dissimilarity exhibited of remaining aspects may be substantial. The visual appearance is the aspect that has been reproduced, and unless we define a different, non-visual context for comparison, the roman numeral may return sufficiently high values of fidelity to the other units to evoke humour. However, as always, this depends on the subjective assessment of the individual.

It is not possible to add a unit to figure 10 that the scanning process has not deemed to be similar on a visual, columniform basis. The comparative context of figure 10 was left intentionally wide and, as long as it is understood that the brain has positively recognized the presence of similar properties of some form on this basis (rather than simply comparing and contrasting units on an independent scale), this is adequate for most analyses, although further definition may help to avoid potential confusion. The use of wide contexts is most appropriate where there are multiple points of similarity of which none is dominant, leading to the perception of, to all intents and purposes, a single shared but wide-ranging property. If, however, we decide that the context does indeed require further definition we may refine it to pinpoint the precise quality through which we have drawn comparison within the generic similarity of visual appearance. For example:

Similarity has now been assessed to exist between fewer units than

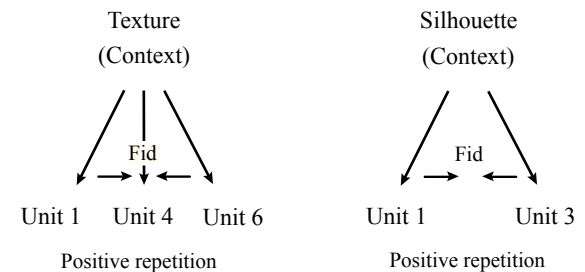


Figure 11: Two separate relationships produced by closer definition of the comparative contexts for the available information from figure 10. Now units 1 and 3 are assessed to exhibit positive repetition where the context is *delineation*, and units 1, 4 and 6 where the context is *texture*. We could further identify, perhaps, similarity of silhouette between units 5 and 6, or countless other connections on a non-visual basis to produce new relationship diagrams from the units provided here.

those originally all considered viable within figure 10. It is important to note that there is no objective solution to these assessments since each must occur on an individualistic basis. The extent of fidelity between units 1 and 3 in figures 10 or 11 depends on subjective judgement and once we have posited multiple units for comparison the degree of fidelity they exhibit must be assessed by the individual. An assessment of the same information in figure 11 could return apparent similarities between different units if undertaken by a different individual.

Visual appearance is a relatively straightforward physical medium in which to identify common properties for comparative contexts, but positive repetition may be identified in any information, whether property, entity or activity, abstract or concrete, provided it arises in more than one unit. Consider a scenario in which an individual laughs at the coincidence of discovering they were living in the same street at the same time as a person with whom they later became acquainted elsewhere. The same pattern of positive repetition occurs in the comparison of their experiences as in the comparison of visual attributes. All coincidences, while potentially compounded by patterns of recontextualization, are founded on the activity of positive repetition.

Positive repetition commonly occurs on an internal and external basis

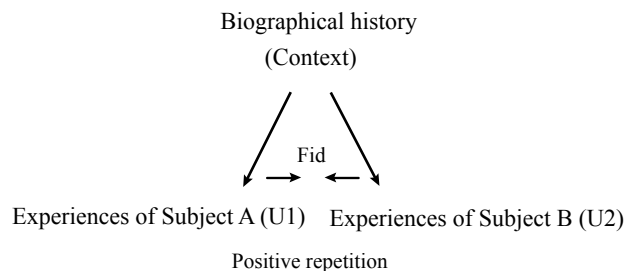


Figure 12: A generic unit and context diagram representing a form of biographical coincidence. The more similar the details of the shared experience the greater the coincidence and the greater the significance of the pattern of positive repetition. We may refine either the context or the units further depending upon the details of the coincidence recognized. We may, for example, refine the context to fall within a certain timescale, or to refer to a certain aspect of the subjects' lives.

in all sorts of humour and accounts specifically for a great deal that has been excluded from the faculty of humour as perceived by prior theories. The incidence of positive repetition is greater than of any other pattern, and as a starting point for analysis the traditional procedures of comedy will provide us not only with a familiar format through which to assess its activity but also an illustration of the singular nature of formal and informal humour as posited by *pattern recognition theory*.

The internal and external form of positive repetition occurs most commonly in formal humour in its observational types such as stand-up, where it is known as *it's so true*. The greater the fidelity between the information to which the individual is alerted externally and the supporting evidence with which it is compared internally (in other words the more accurate the individual considers the observations), the stronger the pattern and, all other factors remaining equal, the more amusing the individual will find the performance.

Remaining on the stage for a moment, closer analysis reveals that internal and external positive repetition is not only expressed in explicit *it's so true* humour in which the individual's assent to the accuracy or verity of that material is sought. A recognition of the truth of an observation is not necessary for the recognition of a repetition to occur; indeed, any retained information the individual recognizes in an external representation may potentially form a pattern of this type, although the vast majority of instances of simple external recognition will not evoke humour since they are unlikely to exhibit discrete recognition or are likely to fail one or more of the remaining necessary conditions. Indeed, most information of this type would automatically bypass the system by default channelling. However, aspects of the individual's personal life and private experiences they do not expect to observe in an external representation may qualify for further analysis, whether memories of external perceptions or thoughts past or present. Such elements of personal experience reproduced externally require no statement of truth yet still produce potentially unique patterns. The behaviour of a character the individual recognizes as similar to that of someone they know, a certain phrase, expression, look or sound they have previously recognized in friends or colleagues, or indeed any information the individual retains, may be repeated externally to form a pattern, in which the accuracy of representation, the fidelity of its construction, determines its strength. The perceived verity of a statement in stand-up or similar comedic performances simply reflects the accuracy of the pattern involved on an internal and external basis in this particular format of humour, and simple statements of truth will not be recognized as patterns unless discrete recognition occurs

for whatever reason perceptual or conceptual. Since we are concerned only with the relationships of equally weighted unitary information, an abstract concept such as truth has no bearing on the mechanism of humour.

If we now remove ourselves from the stage and reduce the formality of the humour, placing ourselves in a conversation in a bar or a restaurant and listening to the observations of a friend evokes the same process of recognition without the stylistic format of stand-up, or, indeed, without any formally stylized humour. It is now a simple step to translate this variety of apprehension from formal humour to analogous situations in everyday life, in which the intention to amuse is absent. On this basis positive repetition occurs regularly and may or may not form compounds with other patterns as it does so. For example, if the individual has received information that a subject is feeling nervous before giving a speech who then proceeds to drop their books, positive repetition may occur in the form of confirmation of the individual's retained information, alongside any further humour based on the physical bungling of the subject (see *Qualification*).

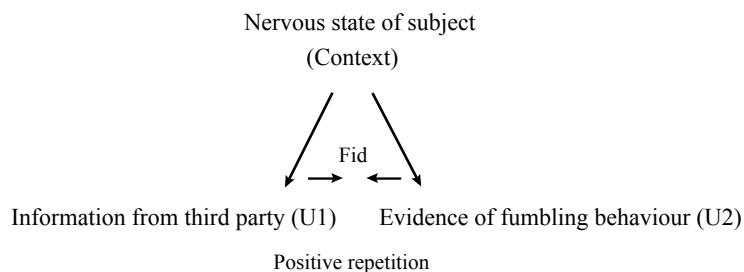


Figure 13: A unit and context diagram representing confirmation of information. Even if the individual has not received the information of unit 1 the behaviour of the nervous subject may be *translated* (see later) in fidelity into an internal representation producing two separate units, whereby the external behaviour forms the first, rather than the second of the two terms. Further patterns would commonly also be recognized in such fumbling ineptitude, such as the *executive recontextualization* of error, to be discussed shortly.

The fumbling lecturer described here could perhaps be considered the stuff of comedy so let's now remove the remnants of formal humour and identify the activity of positive repetition in a much more clearly informal role. As the lecturer begins to speak he repeats words we have read only minutes beforehand, and positive repetition is recognized. The simple repetition of the *linguistic content* (forming the comparative context) between the two units (*the book we've just read* and *the words the lecturer speaks*, forms a significant pattern and humour is evoked. At this point the moniker of *it's so true* becomes redundant, and the individual experiences simple positive repetition on an internal and external basis.

It's so true positive repetition can also arise on an entirely internal basis, where one conscious observational thought is supported by the prior perceptions of the individual. In such a situation the primary thought is equivalent to the usually external humorous stimulus. This process of auto-humorous evocation reflects the separation between the conscious nature of intellect and the unconscious recognition of patterns, and is possible as long as discrete recognition occurs between the two units.

In a similar manner there is no reason for a speaker not to recognize patterns in the material they transmit, and for all the necessary conditions of humour to be met by doing so. Consequently a speaker may recognize just as many, if not more, patterns than a listener. It should not be forgotten that patterns only exist on recognition, and informal speech is rarely rehearsed. On its pronouncement it then provides units from which patterns may be constructed by anyone who apprehends it, including the speaker who has access to information not available to the listener potentially increasing the number of patterns they may recognize. Just as the listener may identify patterns in material from their own experience not recognizable by the speaker, so may the speaker. However, the speaker may also apprehend fidelity of an internal monologue or intended communication alongside the words they actually speak. If the process of the individual monitoring their own communication becomes separated from their intentions in any way, the two may form discrete units in either fidelity as described here or magnitude as discussed shortly. This form of auto-humorous evocation in dialogue is often heightened by a nervous state that separates the individual's recognition of their words from their inner thoughts.

Positive repetition is an important and highly active element in the informal humour of quotidian perception, but is also common throughout all other varieties of humour. Beyond observational commentary it is specifically the mainstay of *mimicry*, *catch phrases*, *separated at birth*, *destructive punning*, *amusing rhymes* and other phonic similarity, various infantile games

such as *peek-a-boo* (in combination with locational recontextualization), *caricature* (in combination with patterns of scale), *parody* (in combination with minification and executive recontextualization),⁴ *slapstick* (often with orientational and executive recontextualization), *required response* (such as *made you look* and various associated forms of bullying), *come-uppance* (sometimes with patterns of scale), and *it's behind you* pantomime humour (with interpretative recontextualization). It is also one of the most common patterns arising during social interaction, improvised wit, political satire, standard jokes and television comedies, where it is the pattern most likely to consist of more than two terms.

The simple process of repetition that characterizes the use of catch phrases in formal humour (and less obviously and less commonly in informal humour) is recognized as positive repetition since multiple instances occur within the same context thus:

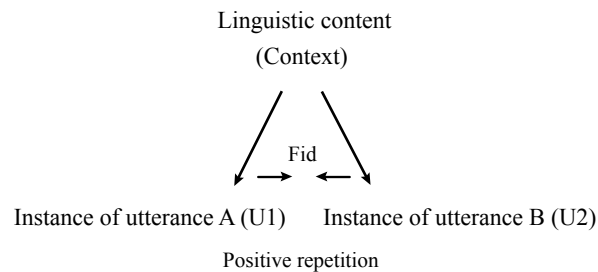


Figure 14: A generic unit and context diagram representing the recognition of a catch phrase.

Repetition of this form is explicit, since the philological content of the repetition remains the same as well as the implied meaning. While simple,

⁴ While some formats of humour rely heavily or exclusively on certain set patterns that provide them with their identity, many stock genres have previously been identified on a content or stylistic basis unrelated to their underlying structures, and many stimuli to humour have generally been overlooked as such. It is not possible to provide a simple pattern summary that will apply to all instances of a certain format since any recognition may be compounded by ulterior patterns. The formats suggested here for each pattern are far from exhaustive and are intended as illustrative examples only. Further information, including definition of the types referred to throughout this volume and a description of their commonly occurring constituent patterns appears in the *Resources* section.

such formats continue to produce enormous volumes of humour. Conceptual (or *implicit*) positive repetition is also common, however, where the explicit repetition is lost but an implicit connection is retained behind the superficial differences. While mimicry is based on explicit fidelity, caricature is founded on a combination of both conceptual positive repetition and *magnitude* in patterns of scale (ut infra). The magnification of a randomly selected feature of the subject would not necessarily facilitate an effective caricature, since a conceptual or *implicit* accuracy to (and therefore a justifiable reason for) the pattern of scale the caricature adopts is required for positive repetition to occur and humour to be evoked.² Without it, the drawing simply depicts a person the individual may or may not recognize with one of their features exaggerated regardless of how small or large it may appear in reality. While this may of its own accord evoke a response, the observational accuracy has been lost and the pattern recognition affected.

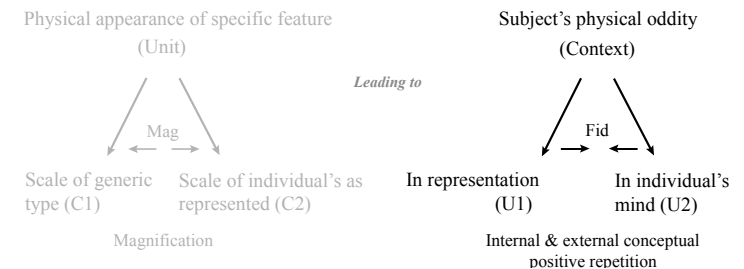


Figure 15: The basic unit and context diagram representing graphical caricature. The currently greyed-out pattern of magnification depicts the process by which the individual feature is exaggerated in the representation and will be discussed in the following section regarding patterns of magnitude.

The pattern of *scale* that exaggerates the subject's features in figure 15, capable on its own of producing humour (for example in the *hall of mirrors*), in the combination producing caricature leads to a conceptual positive repetition also. While the depiction presented in the caricature is not in fact graphically accurate (as it might be in mimicry) the level of exaggeration

² A question over the identity of the intended subject may also arise if the depiction exaggerates inappropriate features.

centres on a feature the individual agrees is larger in the subject than in the generic type, producing an implicit fidelity between the humorous observation and the individual's perceptions. Elsewhere, magnification or minification with conceptual positive repetition is a common pattern compound in many varieties of both formal and informal humour.

Such implicit positive repetition is common, permitting absolute alteration to occur in the body of the content in which we recognize fidelity. Due to the nature of language in particular it is possible for superficial linguistic constructs to undergo alteration yet the meaning behind them to remain identical. Regardless of the explicit philological content in which the patterns are recognized (the exact words themselves), the implied semantic content (their meanings) may reveal patterns of their own of either perfect or imperfect fidelity. Consequently linguistic pattern analysis can prove initially misleading.

This form of positive repetition based around implied meanings is *connotative*. It may also exist by the repetition of *similar* or *associated terms*, whereby the connecting concept is the binding common to all the superficial linguistic or communicative manifestations it adopts in different units. Knives, forks and spoons, for example, while exhibiting varying degrees of explicit repetition of form, are all connected in perfect fidelity by the common linkage of cutlery. Some forms of repetition through associated terms may be assessed as weaker than explicit forms by some individuals. The assessment is subjective, and dependent on to what extent the recognition of implicits is awarded significance over their explicit forms. Humour's contribution to the development of categorization and hierarchization is introduced later in this volume and considered at length elsewhere.

Where two earlier ideas repeat and combine in a new construct, such as occurs in instances of destructive punning (along with a third pattern recognized in phonic similarity), double positive repetition has occurred. This arises in many other formats of humour such as witticisms and one-liners but also in non-linguistic media. As a shorthand, while both units repeat separately in the individual's apprehension, we can refer to it for simplicity's sake as *combination*.

Since positive repetition may be formed between units external to the individual and information they retain internally, that retained information need not only take the form of memories. A unit for comparison with external perceptions may just as well be the product of imagination or prediction as the memory of factuality or experienced events. Consider figure 16.

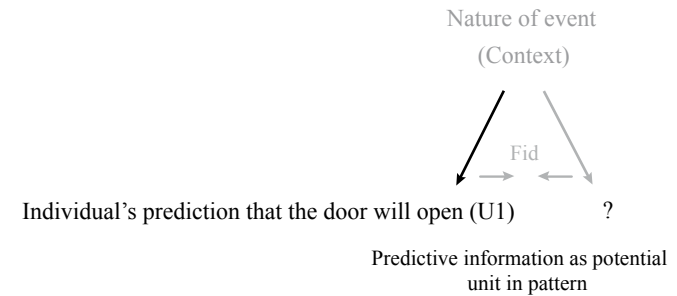


Figure 16: As yet the prediction does not form a stage within a pattern. Different outcomes from those predicted may lead to the recognition of alternative patterns not involving the relationship (or potentially even the unit) described above.

If the event then occurs, *predictive confirmation* has created a pattern of positive repetition, whereby the prediction becomes a unit repeated in the actuality of the event:

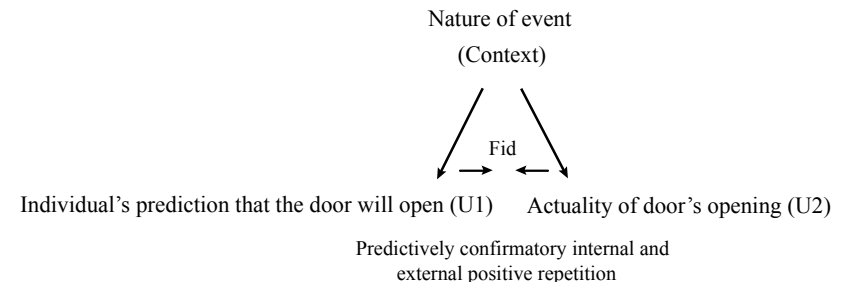


Figure 17: In matters of event prediction the context is often composed of a simple context of *nature of event* by which the prediction is compared with the actuality for similarity of nature but this may be refined. As with all patterns of fidelity, the closer the prediction the greater the significance.

Predictive confirmation is interesting in that it informs us about the nature of surprise as a necessary condition of humour. In infantile games such as *peek-a-boo* it is central to its success, in that uncertainty about the manner in which the next term will arise enables the pattern to be found surprising despite the fact that its occurrence is predicted to varying degrees. In adult humour the same principles apply, in that suspicions are confirmed yet the process by which this occurs continues to surprise and engage the individual. Indeed, the actuality of an event may still be surprising despite forewarning of its occurrence in any situation either humorous or otherwise. What has traditionally been considered surprise is a somewhat inaccurate term for the necessary condition stipulated by the mechanism of humour, which, being attracted to units of novelty, will then assess the extent to which information has been absorbed from the stimulus. Now, however, we are getting ahead of ourselves.

When apprehending units in positive repetition, we may summarize the value of the process by translating it into a simple cognitive question: Does one unit I perceive exhibit significant similarity to another unit I perceive as far as this property I'm searching for is concerned? The value of such comparisons will be expanded upon as this volume develops.

Division

Just as the multiplication of a unit can be effected by its repetition as a whole, its division can be effected by repeating it in parts, whether on a spatial, temporal or qualitative basis.

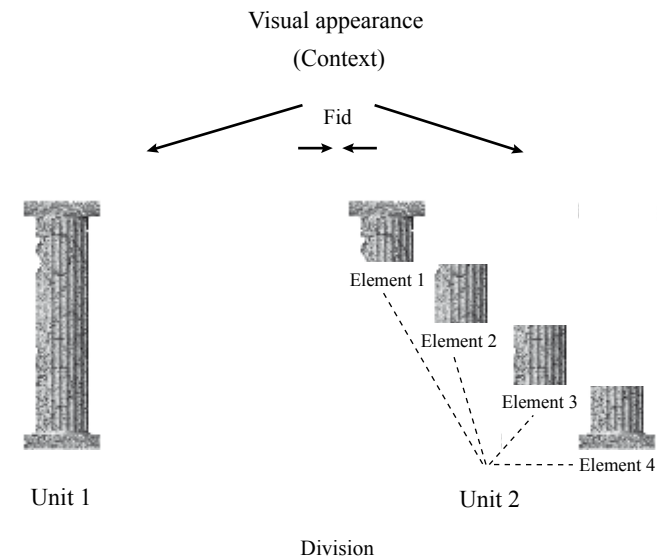


Figure 18: A simple comparison of a unit with its divided equivalent forming a pattern of division. The same wide comparative context is repeated from figure 10, and draws together the two terms by its repetition in both units.

In this example the information from the first unit is repeated in a divided format, and the two units are then compared for similarity despite the nature of the fragmentation. The second unit may appear in stages of either temporal or spatial dimensions, yet it remains a single unit only, each fragment constituting an element within the single term. All the fragmented elements must be present for comparison with a whole unit for division to be recognized. The absence of any single element will lead instead to the potential recognition of different pattern forms.

Division is the least common of the eight patterns in formal humour due to its destructive nature. While it does not correspond to any popularly identified format of humour, it does, nonetheless, arise in set pieces on television, film and radio with some regularity. The destructive nature of division means it is often, although not exclusively, applied to actions or linguistic entities rather than physical objects, such as where alternate words are spoken by different individuals or where, in clowning and similar physical humour, a single process is performed by multiple individuals by separating it into component sections or parts.³

In instances such as these the pattern of division is being recognized on an internal and external basis, whereby externally divided material is compared with its undivided counterpart as the individual remembers or imagines it. Importantly it is the recognition of division having occurred in external material rather than the process of effecting division which is the most frequent manner in which the pattern occurs. The recognition of the coherent undivided whole of the action performed by the participants in its divided version therefore produces a pattern of fidelity, as represented in figure 19.

The recognition of external division is thus the ability to reconstruct units into a single entity, property or action. Division may potentially consist of many stages, but for it to remain distinct from *completion* when recognized on an internal and external basis all the elements of the divided unit must be present in information gleaned from external perception. The external first stage must therefore produce a complete entity, property or activity despite its fragmented presentation (or we must consider it reasonable to apprehend that proportion of the information as a whole unit) without input from the individual, who then supplies the second unit as a cohesive whole.

Since the pattern of division compares similar items regardless of, or even because of, their fragmentation, the comparative context may be anything, just as with positive repetition. In figure 19, perfect fidelity means the undivided whole may be fragmented to produce an exact copy of the divided version, or the divided elements may be recombined to form a comparative for the undivided whole. The process of division has evoked a comparison by re-presenting the unit to the individual with a defined structural alteration, requiring the brain to reconstruct the elements and then

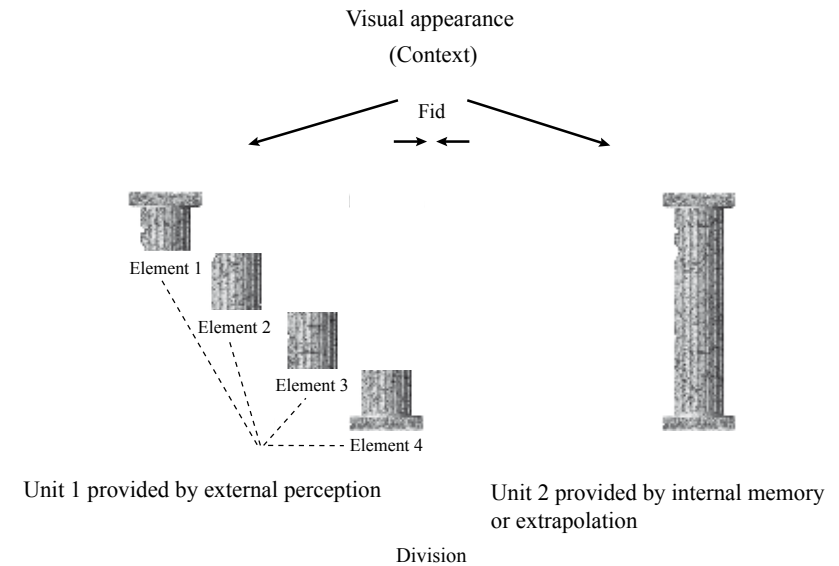


Figure 19: A common form of division takes an internal and external form whereby the fragmentation is recognized by the individual and compared with a mental image of the undivided whole.

rewarding it for doing so. When presented with an example of division the useful cognitive question into which we might translate the process is: Did the divided unit accurately reproduce or represent the whole? Did the divided elements evoke an image of an undivided equivalent?

Any number of divided stages may be compared to the whole if they regularly exist elsewhere as independent entities or form their own entities by doing so. The addition of further fragments may thereby evoke humour once more if each element is seen to represent some form of quantitative whole. In the example below, the first two elements may potentially be apprehended as a potential whole (the horse and cart), and then reapprehended as another complete entity with the arrival of the rider, as seen in figure 20.

The fragmented specific of immediate perception is therefore compared with the generically imagined representation, and two separate units form a pattern of unitary fidelity. Division commonly occurs elsewhere in chain reactions or pass-the-baton set pieces, where a process is presented in component stages, and other entity splitting formats, along with the conceptual separation of associated ideas.

³ Further or alternative patterns of executive recontextualization may also be recognized in such displays, depending on the degree of fragmentation and the level of reconstruction required by the brain. The less the reconstruction required, the more likely the action being undertaken will be perceived simply as an alternative way of achieving the same conclusion, leading instead to recontextualization.

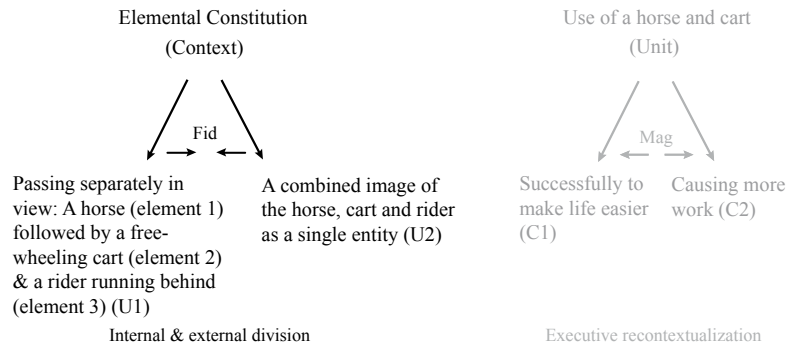


Figure 20: Different elements are perceived by the individual with a time delay between each in the above unit and context compound diagram. Note in this specific example the individual does not imagine the entire entity until all the elements have been presented. The second pattern of magnitude, *executive recontextualization*, highlights the difference in the manner of manipulation of the unit between the generically understood version as the individual considers it and that presented by the scenario described.

Note that with division it is not the *alteration* of a single unit that is being assessed but the similarity between two differently represented units, one of which is fragmented. While it may seem that the observed disintegration of physical objects might be recognized as division this is not the case since the disintegrated unit is observed to retain the same identity as it collapses. It is therefore one unit, and not eligible to evoke fidelity. Watching a car's wheel or a door knob fall off represents rather the *qualitative recontextualization* of a single entity, as discussed later, and is attracted instead to magnitude. However, piecemeal perception through the spatial or temporal separation of the fragments of the same disintegrated unit leading to a recognition of their undivided form through reconstruction would meet the necessary criteria for a pattern of fidelity, and division may be recognized.

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Completion

In addition to the multiplication or division of a unit, it may be absorbed into a larger entity. By doing so we are effectively adding to it, combining it with additional information:

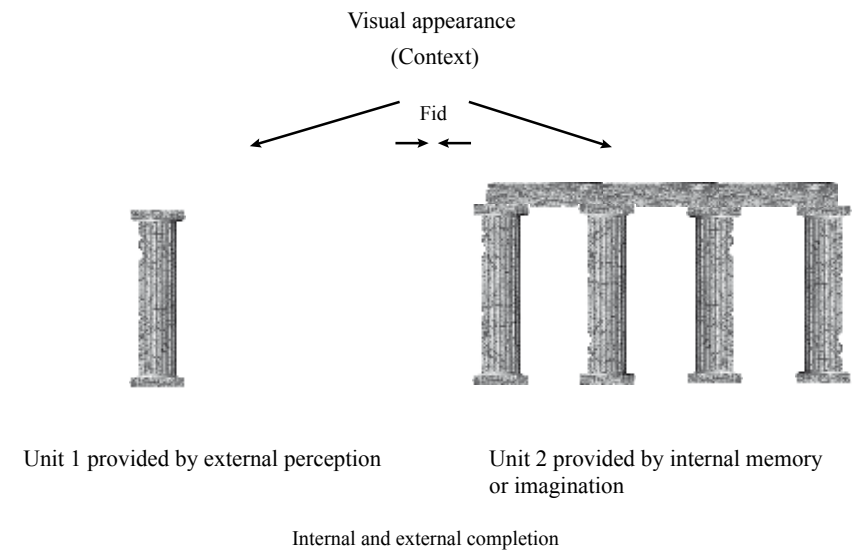


Figure 21: A simple representation of completion whereby the first unit is assessed for its appropriateness as an indication of the second in the comparative context.

By the addition of further elements to the information supplied by either the individual or an external source, blanks presented in the first unit are completed in the second. By doing so a new unit is formed with which to compare the first, leading to a potential fidelity of *appropriateness* in terms of the comparative context. Whereas in positive repetition two complete units (of whatever provenance) are compared, in completion a unit is multiplied and expanded upon.

The second, completed unit may be supplied by externally perceived information but more commonly occurs as a result of the individual's imagination. In such instances there are two minor stages to the process,

whereby the primary unit is apprehended before information is invented by the brain to complete it. Once this has occurred the two stages of the pattern may then be recognized and the levels of repetition judged. The appropriateness of the two units is then assessed within whatever comparative context perceived, and the brain determines whether the information that was supplied as the first unit was a good pointer, a fair corner of the whole picture. The useful cognitive question we may ask is: Was the initial unit appropriate as a taster given the comparative context? Did it evoke an entirety despite its partial nature?

As with translation, it is important to recognize that rather than repeating the same unit when completion occurs we produce a new one possessing a unique identity. By doing so we recognize not the repetition of the unit (since they are multiple) but the repetition of properties which we compare between multiple instances for their fidelity. Any information may be added, whether increased definition of the initial unit or details of its surrounds, either literally as in the observation of a picture or metaphorically in the form of previously unacknowledged causality or consequence.

When completion is recognized on an internal and external basis, it exhibits two main varieties. *Provoked* completion occurs in either formal or informal humour where the first unit is perceived by the individual to be lacking elements, whether intentionally presented as such or otherwise. When intentional, this form of presentation is a common device in formal humour, such as where sounds of activity unseen lead to the audience's completion of the information with further details.

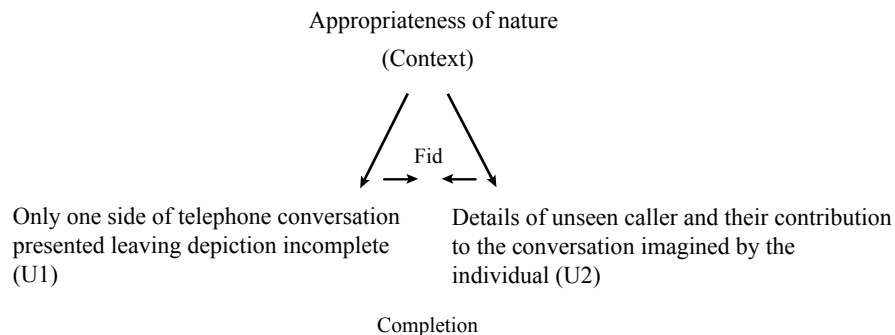


Figure 22: The unit and context formation for provoked completion. The wide comparative context may be narrowed as required to stipulate aspects of the two units that are judged to be similar beyond or below their general nature.

Similar in formation but different in stimulus, unprovoked completion occurs when any information is supplied with further elements by the individual where it was not necessarily recognized as incomplete to begin with. Expanding on figure 22, an alternative situation occurs in which the individual observes both sides of the conversation but now proceeds to supply information without provocation about the motivations of one of the participants, producing a second, completed unit. It may therefore appear that the nature of the completion is of no relevance to the recognition of a perfect pattern, since any information supplied by the individual may be judged by that individual to reflect accurately the first externally perceived unit, and while this is true to some extent the process of analysis, unlike the completion, is not undertaken by a conscious part of the brain, and the two units must still be compared for similarity within the confines of the comparative context. Assessments will thus occur to determine whether, having produced an unprovoked completed unit, returning to the first to compare them supports the picture provided by the individual's imagination.

Completion can be particularly effective where sensations and experiences are evoked from redolent fragments of information. Emotions, feelings and first-person perceptions are just as commonly the elements the individual adds to form the new unit as concrete entities or information:

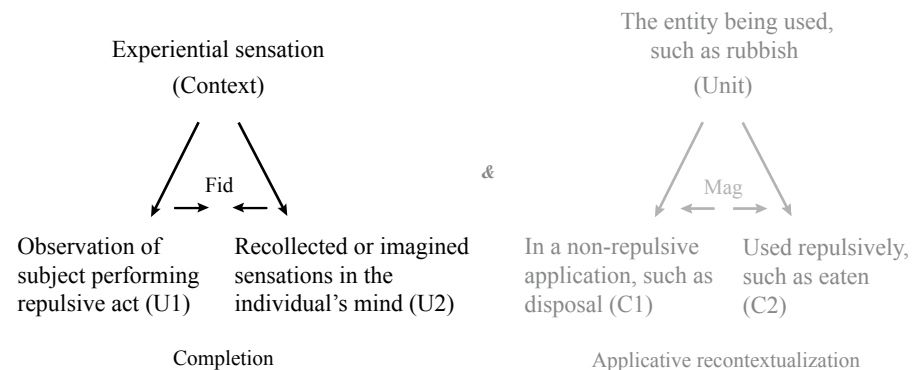


Figure 23: *Repulsion* humour is based on the common recognition of a pattern of completion in combination with one of several forms of recontextualization of the entities or actions involved, to be discussed shortly.

Just as other patterns require significance in order to be recognized, so too does completion. The underlying strength of the pattern relies as with all fidelity on the similarity of the two units, and the extent to which the completed picture can be evoked by the initial unit. However, completion provides an insight into one of the necessary conditions of humour beyond pattern recognition. Insignificant experiences or minor feelings will tend to go unnoticed, regardless of their similarity. The greater the completion performed by the individual, the larger the area of the canvas or the more intense the experience, the more engaged the individual may prove to be by the recognition of the pattern. Minor completion, while perfectly fidelitous, may not even be recognized as a pattern if the unitary information is considered unsurprising and unengaging. In *repulsion* humour the evocation of the secondary unit in the individual's mind and the significance it bears to remembered or imagined experiences may be intense, and such provoked sensations serve to create an engaging and powerful pattern. Stages of completion may also potentially lead to an escalatory daisy-chaining effect, whereby the newly completed unit is then completed with further unprovoked information, increasing the experiential sensations with each term.

Completion need not occur on an internal and external basis, however. While less common, *provided* completion occurs throughout both formal and informal humour, where the second unit is presented to the individual without their addition of further elements. When provided, completion often leads to *interpretative recontextualization*, as will be addressed shortly.

As well as occurring in *repulsion* humour (with applicative recontextualization), completion is common in *noises off* (both informally and formally in film, television and especially radio comedies), various forms of *mischief* humour, *wet willies* and *wedgies* and *blankety blank*. It also occurs during *mime*, improvised games using *props*, and is frequent in many instances of *linguistic error* as the mangled construction is provided with an imagined existence. Since any event, unrestricted by the nature of its apprehension, may be completed with further detail by the mind of the individual, it is important throughout all types of formal and informal humour, and explains a great deal about what is individual in a person's sense of humour. Any completed unit may then lead to the recognition of further patterns depending on what is imagined, such as opposition if the completion is recognized as inappropriate.

Translation

The final pattern of fidelity is translation, by which we mean the conversion of units from one medium to another. The same information appears as multiple units in the same comparative context but in translated forms. Translation is therefore comparing analogous units in different media.

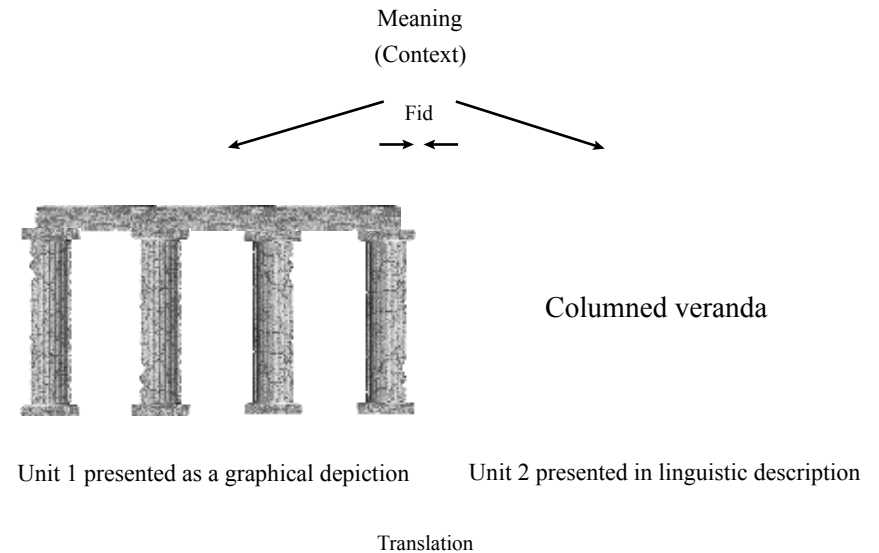


Figure 24: The comparative context of *meaning* is common in patterns of translation since the pattern occurs where a level of interpretation is required between different media. It may be either generic or specific and may be refined to involve other forms of connection. A magnitude-based alternative to the above diagram based on the processes of executing the meaning (as a unit) in different media (as contexts) may also be constructed. However, translation is not the comparison of the media in which units occur but of units within different media.

Since it is based on a process of interpretation, translation is common in facial expressions and gesticulations (*read my signals*), the initial apprehension of original and oddly expressed information, *innuendo*, certain forms of *animals dressed as humans* and any other form of humour relying on the use of interpretation. It commonly arises on an external basis where the first unit, an observed communication or event of some kind, evokes an internal interpretation. The two units are then compared together and the appropriateness of the first unit for the second is assessed. In other words, the fidelity of the two units is compared despite their existence in different media. Figure 25 provides a simple example of a common pattern of translation.

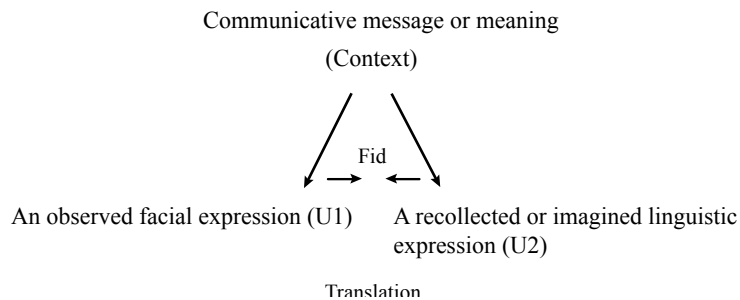


Figure 25: In translation the units (here of the specific facial expression observed and a linguistic expression it evokes) exist in different media and are then compared together.

When recognized on an internal and external basis, as with completion, the precise nature of the unit supplied by the individual is of no consequence since there can be no objective assessment of whether it is correct or not. However, in the translation they supply the individual must subjectively apprehend properties connecting it to the primary unit via the comparative context, whereby both stages are seen as similar and appropriate for each other. The more appropriate the individual judges the two stages the stronger the pattern, and this may vary regardless of the individual's involvement in the translation. The interpretation of a facial expression into a linguistic communication may occur when the individual knows approximately what was intended by the initial communication despite a recognition that it was inaccurate or not especially evocative of the meaning they glean. Instead,

therefore, of the individual identifying a weakened fidelity through their own inability to perform translation, they are more likely to recognize their interpretation as a standard by which the primary unit is judged. Observing a facial expression, its meaning may be obvious from surrounding circumstances and ulterior information, yet its accuracy and appropriateness for the meaning, while substantial, may be assessed to exhibit varying degrees of fidelity according to the individual's perception.

During the translation of facial expressions or other similar communications, it is not necessary for the internally supplied unit with which they are compared to acquire an enunciated linguistic form as suggested in figure 25. It may instead equate to a feeling, an impression, or an emotion not linguistically articulated while still presenting a unit for comparison by the faculty. Neither need we presume that the comparative context must be *meaning* wherever translation occurs. A gesticulation, for example, may be compared with its translated form for, perhaps, *intensity of feeling*, *succinctness of expression* or *offensive content*.

A boundary crossover point occurs with completion in certain instances of translation that is more complicated than a simple compound, in a similar way to the crossover that occurs in patterns of magnitude between application and opposition. Due to the similarity of the pattern types involved and an inability to separate the two with any assurance that both have been recognized created by the nature of the stimuli, the two patterns may remain undivided on rare occasions. The *noises off* of figure 22 represent standard completion, whereas the interpretation of expressions and other signals is first and foremost based on translation. However, in certain stimuli types, such as improvised mime, there are potentially elements of both patterns apprehended simultaneously and it is difficult for the analyst to assess the activity of either in isolation or to confirm that both exist. Such *hybrid* completion / translation patterns are not common but effort should be taken to separate them wherever possible to ensure the closest possible definition has been attained. In situations such as that represented in figure 26 it is unclear whether the brain recognizes two distinct patterns, especially since the first unit of each is the same, but where analysis is incapable of identifying separation or exclusion it is acceptable to hybridize them in order to ensure all potentially relevant information has been supplied.

Patterns of translation also exhibit similarities in certain circumstances to instances of implicit positive repetition. Since the comparative context by which units are compared in fidelity is that which is repeated rather than the units themselves, we could state that translation is simply an extreme form of positive repetition. However, translation requires a process of

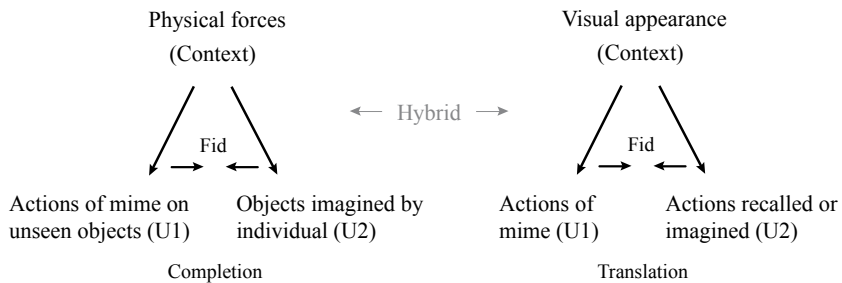


Figure 26: The similarity of completion and translation in activities such as mime also highlights their distinction. In the former the actions require further information to form a whole process of interest to the brain; in the latter they require a different format in order to do so. At such points of crossover labelling these two patterns *hybrid* clarifies that, while they both may be legitimate in isolation, they are most likely apprehended without separation.

interpretation of the stimuli not present in positive repetition which alters the impact of the comparison. Where synonyms with which the individual is familiar may form units in the latter, units requiring a level of interpretation, whether between unfamiliar forms of the same media (such as expressions the individual has never heard before and their translation into language or concepts with which they are cognisant) or between entirely different media (such as gesticulations into language), undergo a significant alteration of medium provoking translation. It is the achievement of the new unit in a state as similar to the first as possible despite its different medium that is rewarded in this process, encouraging both the individual's assessment of units externally and their ability therefore to manipulate and translate with accuracy themselves.

Two differently presented desks may exhibit no superficial similarity at all, yet they maintain a generic fidelity as desks. If I then smash one up and turn it into a boat, the materials appear in a translated medium. Note, however, that we are not here concerned with the application of the same material to a new end, which effects a different sort of pattern (see *Application*), but the ability then to compare the two items, the first desk and the boat together, and to identify their underlying similarity despite the change in form. Indeed, such a comparison in translation should be able to effect absolute fidelity of all visual and structural comparative contexts,

which would be neither permissible nor possible within positive repetition. It is only by the recognition of the different medium, the existence of the analogous state, that proper cross-media comparison becomes productive. However, once translation has occurred, the differing forms may indeed evoke patterns based around their contrasting application of the same materials (see *magnitude* later in this volume).

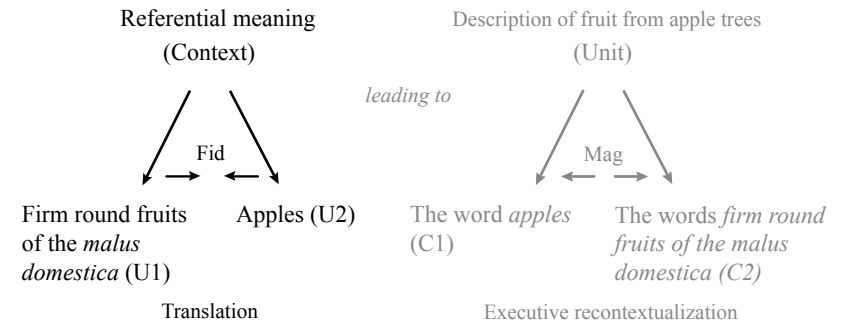


Figure 27: It is not the different procedures for effecting an end that are compared in translation but what is effected in its differing forms. The similarity of meaning is therefore that which is assessed, not the difference between the expressions. Once interpretation has occurred, however, any such apprehension may lead to a potential recognition of executive recontextualization either also or instead, functioning on the alternative basis of magnitude as discussed later.

The initial unit in the first pattern diagram of figure 27 is presented before the translation occurs, which may then arouse humour at the point of interpretation. Only subsequently may the second pattern be recognized since the initial information must have been translated (whether evoking humour or not), in order to facilitate a potential assessment of their differing executions of a description of *apple tree fruit*. Translation of this kind between versions of the same media is less effective than between multiple media (such as between gesticulations and words) which may continue to be apprehended in fidelity without the activity of recontextualization at any stage, regardless of familiarity with the stimulus.

Simple linguistic translation (such as between English and French) will not usually evoke humour due to various factors such as familiarity and

conscious intellectual apprehension. However, the interjection of foreign words into communications in a native tongue may indeed evoke humour in both formal and informal humour for various reasons, including those patterns depicted in figure 27 and further patterns of *qualitative recontextualization* of the speaker.

Imputing specific conscious motives or feelings to either animals or infants as an interpretation of their actions involves translation, whereas the recognition of similar experiences or similar movements between species (such as slipping over or curling up to sleep) is composed of simple positive repetition of the same event since no interpretative element exists in the construction of the pattern.

Patterns Of Magnitude

Thus far we've looked at humour via the fundamental concept of fidelity, from which a rudimentary comprehension of all instances can be gleaned. However, its combination here with its sister concept, magnitude, enables a more accurate and more revealing picture of both the mechanism and the function of humour.

Whereas in fidelity the individual identifies multiple units in the same repeated context, patterns of magnitude exhibit the same unit repeated in multiple contexts. Just as the comparative context must exist in all units for fidelity to be assessed, it is vital to a comprehension of magnitude that the same unit, with the same persistent identity, is seen to be the unit that is repeated in the new context. We are logically unable to recontextualize a different unit since the process of recontextualization requires the same information to be reapplied elsewhere.

In patterns of fidelity at least two units are identified in which the individual discerns some level of similarity, but this similarity need not be absolute, and rarely is. In patterns of magnitude, or recontextualization, the unit of information must be repeated with precisely the same identity in contexts which themselves exhibit variety. In the former we wish the fidelity or similarity of the units to be the greatest for the greatest impact, and in the latter we wish the distance between the contexts (the magnitude) to be the greatest for the same result.

The force of magnitude therefore produces an attraction to dissimilarity of contextual manifestation. The greater the magnitude the stronger the pattern and the more amusing, all other factors remaining equal, the humour will be found. We are now in a position to apply the force of magnitude to the appropriate unit and context diagram from figure 3 as is shown in figure 28.

The force of magnitude therefore attempts to draw the two bottom corners of the triangle further apart. The more squat the triangle, the greater the significance and the stronger the pattern. However, the assessment of significance is subjective, and consequently it can not be recorded on the unit and context diagram in an objective manner.

Whereas in fidelity the context provides the connecting bridge by which the multiple units are assessed, the presence of the unit in magnitude provides the necessary constituent by which the width of contexts may be judged, since it is only possible to assess contexts of magnitude based on the unit applied to them. Without the unit the contexts do not exist but once

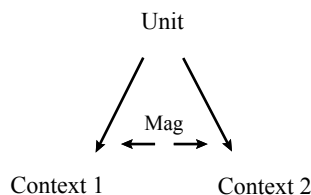


Figure 28: The triangular unit and context diagram representing magnitude exhibits a single unit repeated through multiple contexts. The force of magnitude seeks the most significant dissimilarity of context but requires precisely the same unit to be applied to both. Contexts 1 and 2 are therefore repelled by each other, and the more dissimilar they become, the greater the magnitude and the greater the significance of the pattern.

the unit has been established, its contexts may be assessed. In magnitude these contexts are instances of manifestation, examples of ends to which the unit has been applied, and are connected by their existence within one of the seven categories of manipulative context. If the coffee cup we first examined earlier in this volume is the unit for our purposes and I move it from the table to the floor, these two states of its existence, first on the table and then on the floor, constitute two varying contexts in which the unit has been apprehended, and are therefore assessed for the width, the magnitude, between them.

Importantly, as discussed later in the volume, magnitude is not the opposite of fidelity, despite an illusion that makes it appear so (see Similarity vs. Dissimilarity: The Illusion Of Equal And Opposite Forces). At no point in its activity does magnitude involve the assessment of dissimilarity between units, only of the contexts into which the same, singular unit with a persistent identity is repeated. In fact, magnitude first seeks the precise repetition of a unit before then, and only then, scanning the contexts of that repetition for width of manifestation.

The four patterns of magnitude (opposition, application, qualification and scale) reflect the different manipulative contexts into which it is possible to repeat the unit, and by identifying them the individual is being rewarded for recognizing the repetition of a unit in the widest possible range of situations. Magnitude is therefore an assessment of environment for the unit, of breadth of background information. In other words, it is recontextualization, in which wider and wider boundaries are sought for our units. Each pattern

individually represents a process by which it is possible to manipulate a unit, whether concrete or abstract, and consequently together they form a toolkit for effecting actions on units with varying degrees of qualification.

Responding with the word *blue* to every question asking what colour one wishes numerous items to be would constitute positive repetition and attract an assessment of fidelity, but responding with the same answer to a final question regarding how one is feeling would constitute a reinterpretation of the word itself. This variety of interpretation presents the unit (the word *blue*) in two variant contexts of interpretation, both of which are viable despite their differences. A polysemic word therefore comprises a common unit applied to multiple contexts in interpretative recontextualization, whereas two similar words or the multiple repeated vocalizations of the same word involves a common comparative context repeated through multiple units.

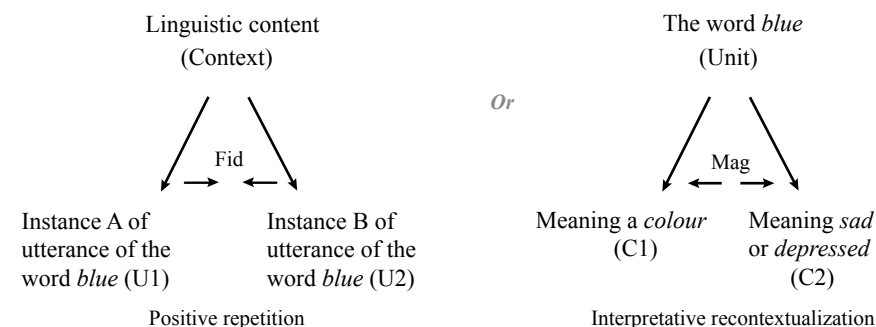


Figure 29: A line of instances of the word *blue* constitutes multiple instances of the same item and they are consequently interpreted as multiple units, leading to an assessment of fidelity. Altering the interpretation of the word *blue* from a colour to an emotional state, however, constitutes a conceptual recontextualization of the single unit, the word *blue*.

Recontextualization of an entity, even if one of those contexts exists in our memories, involves an identical repetition of a unit despite its altered circumstances, and a pattern is formed. In most other respects patterns of magnitude function in the same way as patterns of fidelity. Just as any number of terms may exist in a pattern of fidelity, any number of terms may

exist in a pattern of magnitude, but each two-term stage is most accurately represented as its own complete pattern by the appropriate triangular unit and context diagram. Just as when we assess fidelity we judge only the similarity between the units and not the nature of those units themselves, when we assess magnitude we are affected only by the distance between the contexts, not the content of those contexts in which the unit occurs, and, as with patterns of fidelity, those units being recontextualized may be either generic (the concept of a tree) or specific (a particular tree).

Contextual width in *pattern recognition theory*, while accommodating anomaly theories to some extent via the manipulative context of qualification, is a positive process unrelated for the most part to aberration or inconsistency. Contrary to what may be presumed, neither specific nor generic recontextualization need involve anomaly of any form, only *reapplication* of the unit. Anomalies as traditionally interpreted have usually been identified as a source of humour due to the recognition of either qualitative or locational recontextualizations, yet it is the identity of the unit, the persistent similarity, which is of value in the recognition of humour, not any putative error or alteration. Indeed, a simple change of context need involve no variety of anomaly at all.

In either generic or specific recontextualization it may, of course, be the case that the individual considers one context more common than another, or that one has existed as the dominant interpretation in the mind of the individual prior to an alternative supplanting it, but neither form requires a uni-directional alteration from normality to abnormality in order to function. Abnormalization may instead be observed to occur as a result of recontextualization, since as an independent force it has no impact on the evocation of humour. In non-destructive punning multiple contexts (interpretations) exist simultaneously where neither may be viewed as anomalous or any more abnormal than any other, and since they co-exist neither can be claimed to assert itself as a norm from which the secondary apprehension departs. Further, contexts are not limited in number to *normal* or *abnormal* interpretations. The instruction ‘take this to that man’ may have thousands of potential contexts, and it is important to note that as long as the individual witnesses multiple versions recontextualization may occur, regardless of the speaker’s intentions.

Where interpretations do not co-exist, there is still no necessary progression from, for example, common to uncommon interpretations. Having reinterpreted a communication from the metaphorical to the literal, we may then just as effectively recontextualize it back into the metaphorical since its last specific context becomes the starting point for further manipulation of

the unit. Likewise, having reinterpreted an expression in an original way it may then be reinterpreted in its traditional fashion and, since the magnitude remains the same between the contexts, neither recontextualization will exhibit any greater strength of pattern, all other factors remaining equal. For all other factors to remain equal, of course, the levels of surprise we experience must be similar in both directions.

However, since most units, whether words, ideas, entities or properties, are associated with a dominant interpretation or application from which an alternative would necessarily differ, generic recontextualization has been responsible for misleading many theorists into presuming that abnormalization or anomaly must be central to the mechanics of humour or reflective of its purpose.

We can not, however, simply expose the unit to any context we choose.

Just as the units we assess in fidelity must be judged viable, there are boundaries to the magnitude we can achieve. The recontextualization present in magnitude is, essentially, restricted by the variety of contexts being judged as valid or possible by the individual, providing self-imposed limits for the potential ends to which an individual might consider applying a unit. These boundaries may be relaxed at certain points, however, as discussed later.

While there is an approximate equality to the incidence of patterns between the two main categories of fidelity and magnitude, the representation between the four patterns of magnitude is more evenly spread than is seen in those of fidelity. Where positive repetition is by far the most common of all eight patterns due to its intense activity in everyday activities and social interaction, the remaining patterns of fidelity are less common, and division is the rarest. Opposition, application, qualification and scale, however, are much more evenly represented.

It may at first appear counter-intuitive that different patterns, exhibiting different forces of attraction, may be recognized within the same stimulus with only minor alterations in apprehension, but for many situations patterns of either fidelity or magnitude may be recognized depending on subjective perception. The two major types of pattern may interact freely and are not restricted by any demarcations or limits of material. As discussed earlier, if the process of the individual monitoring their own communication becomes separated from their intentions in any way, the two may form discrete units in fidelity as previously considered or, alternatively, magnitude may be recognized in a different but related unit and context formation. To consider this further, however, we will need to examine in more detail the nature of patterns of magnitude.

Opposition

Opposition is one of the most common of the eight patterns and is recognized in many formats both formal and informal. In order for opposition to exist, the unit (the shared ground) must be exhibited in contrary contexts (opposing views). This common ground is approached from contrary stances and it is this that creates simultaneous opposing contexts.

Opposition manifests itself in many forms, ranging from the reversal of a mirror image or the turning of tables to the polarity of positive and negative extremes. Forces may be contrary also, whether physically (pulling in opposite directions), conceptually (opposing doctrines or emotions) or semantically (in the opposition of antonyms).

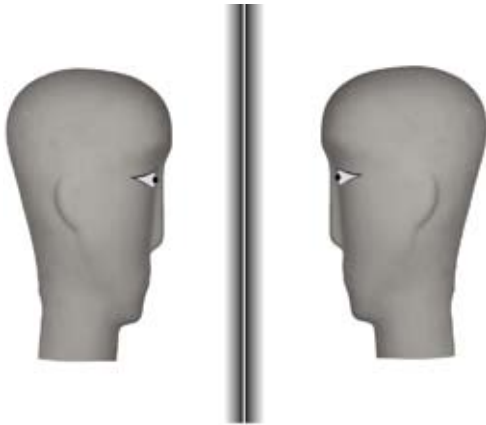


Figure 30: A simple mirror image consists of the reversal of visual detail, producing a pattern of opposition whereby the same information is seen in contrary states.

Since opposition is a pattern of magnitude it is important to remember that the same unit, possessing a persistent singular identity, constitutes the information undergoing recontextualization, not multiple units as undergo comparison in the associated network of fidelity. If we take an arrow and turn it back to face in the opposite direction the single unit is clearly seen in two contrary (opposing) contexts. We may construct a unit and construct

diagram of this principle in a similar vein thus:

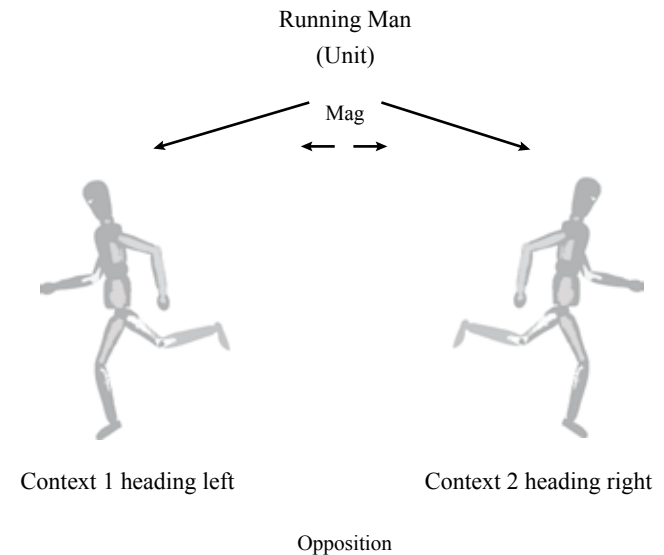


Figure 31: This diagram is a legitimate representation of the unitary relationship involved in opposition provided the same man, with the same persistent identity, is the one depicted in both directions, but incorrect if there is more than one man involved.

Because the man in figure 31 is a single unit, even if we view it in different places or at different times its persistent identity enables us to recognize its opposing nature regardless of the spatial or temporal dislocation. However, since recontextualization can only occur to a single unit, figure 29 forms a legitimate representation only if the unit retains the same identity throughout the differing contexts. Were we to compare the running of two different men acting simultaneously to our observation (representing two separate units with separate identities), we would be unable to consider the singular running man to constitute the unit since two separate identities clearly co-exist. However, unless we wish to compare the two men for fidelity, we are unable to compare them for opposition and they become illegal constituents in our prospective diagram.

This may seem to exclude much that is popularly considered to involve opposition from the scope of magnitude but this is not, of course, the case. The formation of figure 31 has misled us into an important confusion. Now that we have altered the relationship to involve two men running in opposite directions rather than the same one turning first this way and then that, it becomes clear that the definition of units and contexts was inaccurate in our initial diagrammatic representation. While there are two men, it is not in fact they who are being compared as either form of information. The same unit must be repeated in a new context, not two separate units, regardless of any identical or non-identical similarity or dissimilarity that may be exhibited between the instances. Instead, it is the direction in which running occurs that is being viewed in different manifestations, in opposing contexts. While it may appear that multiple units oppose, they do so by providing multiple stances towards a common ground, without which they can not be perceived to oppose at all.

Consequently the unit in figure 31 should be correctly redefined as presented in figure 32, with the contexts providing no more information than the stances of the shared singular unit. Once we have done so, the unit and context relationship thereby applies to circumstances involving either one or several running men since they represent no more than the information in which the unit and context relationship is manifested, not the units undergoing recontextualization.

While this may seem counter-intuitive at first, it is important as a principle of opposition and, indeed, of all recontextualization. If you bring your two fists together until they oppose each other, it is not the fists that are being contrasted but their contrary stances. The unit is therefore *direction of fist* with the two opposing manifestations of *right against fist B* and *left against fist A* constituting the contextual variants. The activity of opposition in linguistic or conceptual constructs behaves in exactly the same way, as may be illustrated by a simple example of sarcasm as shown in figure 33.

While my opinion is the unit viewed in two contrary states in figure 33, those two states are provided by different sources: my external statement and your internal knowledge of my views. These two separate manifestations of the same unit exhibit a contrary nature, such that what I claim to think is considered positive yet what you know to be the case is considered negative, producing a simple opposition. Doctrinal or philosophical opposition functions in precisely the same way. Contrary economic policies or political parties view the same issues (healthcare, education, monetary policy) in opposing contexts, or adhere to single broad stances on political agenda. The simple opposition of right and left wing, liberal and conservative, regards

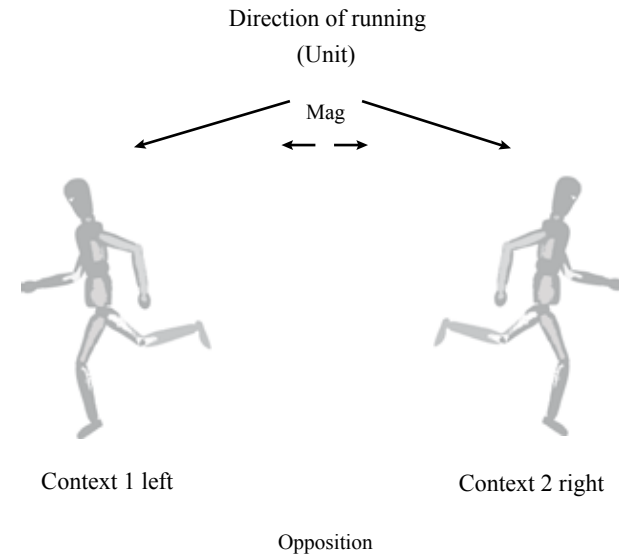


Figure 32: Since opposition occurs only on common ground, if we wish to diagrammatize the contrary running of two subjects, the unit is not the man (of whom there may be only one in a pattern of magnitude) but the direction of running or other contrarily manifested aspect.

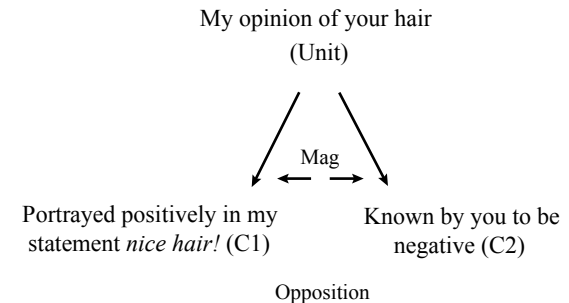


Figure 33: An example unit and context diagram for sarcasm.

the same single units (political persuasion or attitude to social policy or reform) and presents their opposing manifestations (right or left wing) as the contexts for the common ground.

It may already be apparent that the calculation of magnitude between the two contexts, the strength of opposition, is not in fact performed on any identifiable precision of the opposition but rather its intensity. Aligning two opposing positions precisely does not in fact generate the strongest possible pattern. Consider this in relation to the sarcastic relationship of figure 33. My statement of *nice hair!* exhibits greater intensity if it reads instead *really nice hair!* or *the best hair ever!* This intensification of the context towards a greater positivity produces a stronger opposition with your retained knowledge of my negative views, and the more extreme the opposition the greater the significance of the pattern.

This process of intensification of contextual width reminds us that we are dealing with patterns of magnitude, not fidelity, which is inadequate as an explanation of opposition. In the latter the greater the precision the greater the significance of the pattern, yet this can not be achieved in matters of recontextualization. Opposition is more than repetition in negatives.

The contrary stances of *I like it* and *I don't like it* (regarding whatever unit we select) constitute a precise opposition exhibiting perfect fidelity in all but the embedded polarity. The same phrase, the same meaning, the same attitude is simply negated. However, if we then compare it with *I love it* and *I detest it*, the latter clearly exhibits a greater pattern strength, featuring a greater distance (magnitude) between its opposing contexts. While the same sentiment was precisely negated in the former, the enhanced intensity of *detest* and *love* produces a greater recognition of opposition. The precision of the opposition is therefore not as important as the extremity of difference between its comparatives. The strength of language employed often contributes to the perception of this distance in both formal and informal humour.

Opposition is related to *orientational recontextualization* as a form of *application*. It is distinct, however, for precisely these reasons of intensity. While *forwards* and *to the side* may be recognized as orientation, so too, therefore, may *forwards* and *backwards*, yet at this point orientation has reached its limit as far as polarities are concerned (although it may of course continue to perform complete revolutions in increased reorientation). Opposition, however, may continue to intensify from this point as illustrated in figure 34. The unit is the movement of the train repeated in contrary states in both oppositions, yet the latter exhibits greater magnitude due to the increased intensity from the polar alignment not possible in reorientation.

Neither set of contexts is more precise than the other, yet one exhibits clear intensification.

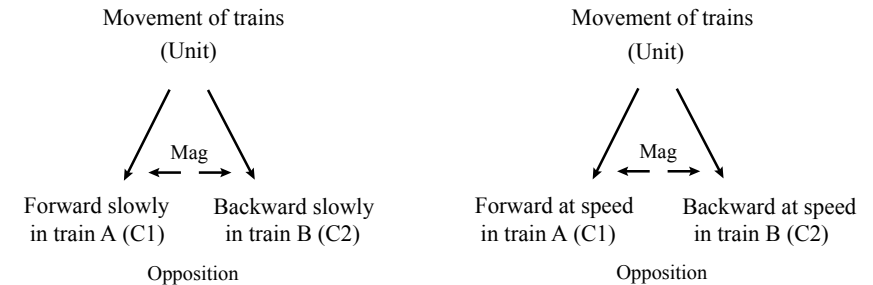


Figure 34: An illustration of significance in opposition.

Since opposition is an inevitability of human interaction it arises commonly in behavioural differences and contrary attitudes. *Giggling fits* in a sombre or oppressive environment, while potentially initiated by any stimulus, are generally perpetuated by a simple opposition, based on alternate states of *behaviour*. This common unit is presented in its expected, enforced or clearly evidenced state in the surrounding event (*gravity*) and repeated in an opposing state via the individual's behaviour (*levity*). The more the individual giggles the greater the significance of the pattern, leading to a potential escalation of stimulus and response. Once a giggling fit has been established it may also be perpetuated by positive repetition, especially if more than one individual is involved (see *Resources* for further details). Thwarted efforts are also recognized as opposition, since the attempt to effect a certain end involves a positive force towards its achievement which is opposed by that which prevents it, and this may compound the process of escalation.

Elsewhere opposition is common in *irony*, *hypocrisy*, *you are not amused*, some forms of *mischief* humour, *revenge*, *subversion displays*, *turning the tables* and *caught with their pants down*, and its recognition is responsible for much that is found amusing in conflict scenarios. In matters of emotion, scale increases or decreases may sometimes be recognized as oppositions if the recontextualization between alternate states is swift and distinct.

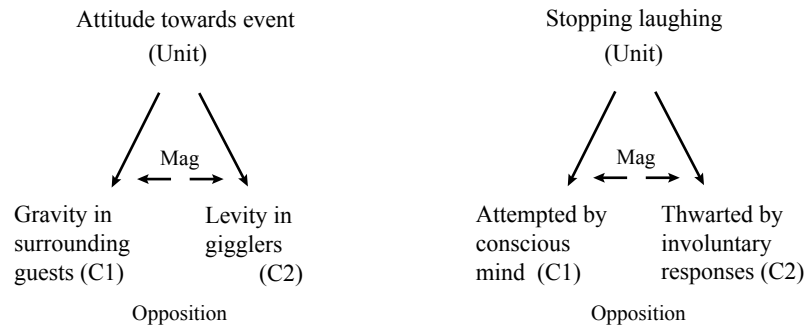


Figure 35: While any stimulus may be responsible for the initiation of a giggling fit, its continuation will often be caused by one or more patterns of opposition. In addition to those depicted here, patterns of scale may be recognized as the laughter escalates and positive repetition as others join in.

Application

Just as the directional force exerted on a unit examined in opposition provides the unit with a context, so too does the application of that unit to a certain use. We can alter this application without altering the unit itself, but by doing so we apprehend the same information in a new light. We could, for example, find numerous (potentially limitless) applications for physical objects, and this holds true for non-physical entities or properties as well.

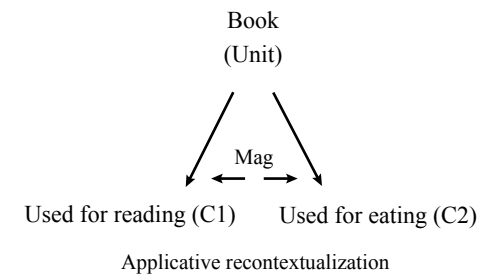


Figure 36: The unit, an entity, is recontextualized through different applications.

Application may consist not only of a function we assign to something but of a *meaning*. A differently applied word undergoes semantic reinterpretation, enabling interpretative recontextualization of the same unit (the word) in two or more manifestations. Equivalently, just as we may reinterpret communication we may reinterpret an entity by assessing its intended application, the *meaning* of its design or configuration, as represented in figure 37.

Further, just as we can apply a unit to a certain activity (use it for a certain end), or apply a word to a different meaning (interpret it differently), we can apply a unit to a different *location*. A plaster applied to two different places has been locationally recontextualized, as has the coffee cup discussed throughout this volume as it moves from table to table or table to floor. Such recontextualization plays an important role in some forms of absurdist humour. The presence of a tree in a closet or a shark on a rooftop is only remarkable because the individual's perception of the generic location for

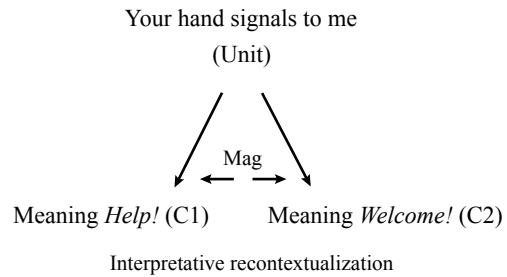


Figure 37: The unit, an action, is recontextualized through different interpretations. There may also be an initial pattern of translation for the first interpretation of the signals, or it may appear immediately clear as a direct communication.

both exhibits variety from the specific as observed in these instances, and the generic repetition of the unit through these alternative states produces a pattern of magnitude by which the individual assesses the width of contextual application of the unit. However, locational recontextualization also occurs frequently in informal humour:

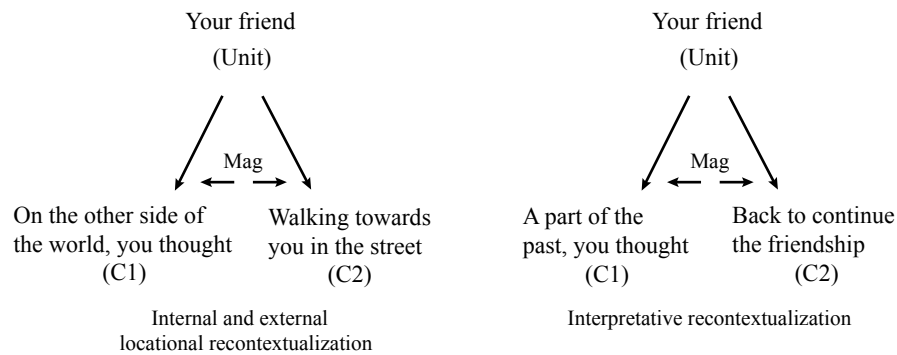


Figure 38: Two commonly recognized patterns when bumping into an old friend. Positive repetition is also often recognized when the friend is first observed after a substantial period, especially if they appear hardly to have changed despite the years.

Various similar scenarios evoking humour are founded on the same pattern, such as when a missing domestic item turns up in an unexpected place. Importantly, locational recontextualization may apply not only to entities but to activities and properties also.

Finally, as well as applying the unit to a certain location, we may apply it to a certain orientation. In three dimensions the number of potential states of alignment are of course dependent on our unit of measurement, the unit being manipulated, the individual's perception and the method of application, and are theoretically limitless. Figure 39 presents a commonly recognized form of reorientation.

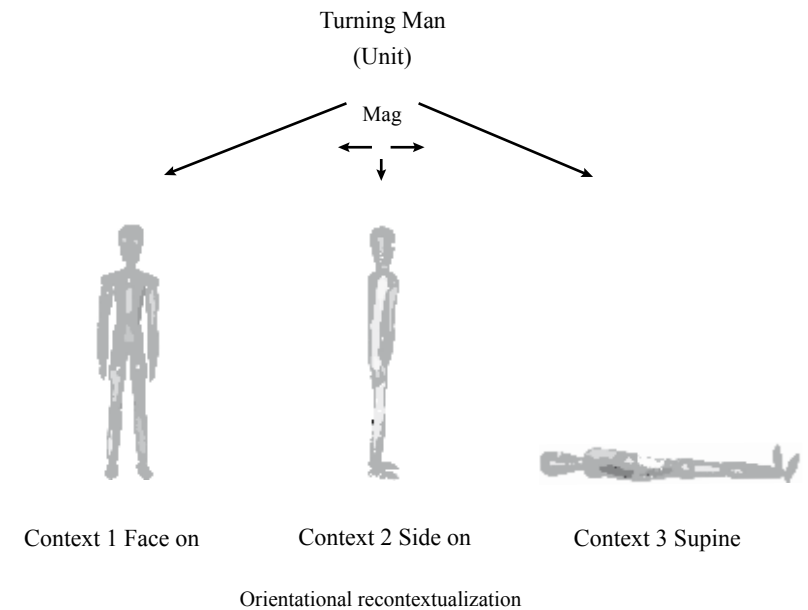


Figure 39: Orientational recontextualization is commonly recognized in forms of *falling over* humour, often in combination with executive recontextualization.

The pattern of application therefore consists of four minor connected forms: *applicative*, regarding the application of an object to a different use; *interpretative*, regarding the application a word, action or entity to a different

meaning; *locational* regarding the application of a unit to a different location; and *orientational* regarding its application to different alignments.

Elsewhere these various guises of application are common throughout both formal and informal humour, such as in *non-destructive punning* (interpretative recontextualization), some forms of *mischievous* humour (interpretative recontextualization, often with positive repetition or opposition), *tower block demolition* (applicative recontextualization during the building but then *locational* recontextualization during demolition), *surprise ambush* (interpretative recontextualization sometimes with opposition), *Spoonerisms* (locational recontextualization often leading to positive repetition), *peek-a-boo* (positive repetition with locational recontextualization in some forms), *falling in* (locational plus potentially executive recontextualization) and *falling over* (orientational recontextualization potentially with executive recontextualization also). Simple reorientation, such as when slides are projected upside down (sometimes in combination with *error* humour) or sudden changes in perspective (such as those viewed by a child when picked up and turned upside-down) are also common sources of informal humour.

Again, however, just as with fidelity, any instance of *application* must be significant for a pattern to be recognized. The application of a book to prop up a table leg may not produce sufficient significance for a pattern of magnitude to be recognized if considered on a generic basis since this is a frequent context for the unit, and to that extent the application of a book to this end exhibits no material recontextualization. Indeed, the information will most likely be default channelled without alerting the system to its occurrence since it will fail to register as novel or of persistent interest. However, applying the same actions to a specific book, perhaps one that is especially cherished or expensive, or one that is brand new, may still be recognized as significant. Using the same book for food, for example, may be recognized as applicative recontextualization on both generic and specific levels.

The recontextualization of some units through increasing widths may eventually produce a polar opposition between those states. This is perhaps most obvious in reorientation, where some alignments lead to a hybrid orientation / opposition pattern due to reorientation, such as a person turning back on themselves, producing an opposition where no specific level of intensity is assessed. However, oppositions may also arise by simple reinterpretation into antonymous states or reapplication to contrary ends. While this occurs in certain patterns it is not necessary for effective recontextualization and often not possible. For example, having applied our plaster to an arm or a finger, what would constitute an opposing context,

other than not applying it, which involves no actual reapplication? Where opposition does arise as a consequence of other forms of recontextualization (such as in the reinterpretation of my hand signals from *Come here* to *Go away*) the reinterpretation or reapplication should be chosen as the representative pattern since any opposition is inherent within its relationship and does not require separate representation.

Beyond its use in linguistic humour, interpretative recontextualization is also important in the judgement of behaviour and consequently arises frequently in *mischievous* humour. Scaring victims by presenting them with information that appears to imply the presence of a threatening situation when there is none is fundamentally based on interpretative recontextualization in stimuli such as *play ambush*, in which the action causing fright (the unit) is seen in two different states (*threatening* and *benign*) by either both the perpetrator and the victim or the perpetrator alone. The ancient prank of scaring by implying the presence of a threatening entity (whether through costumes, noises or other information) reveals a wider magnitude of interpretation the more exaggerated the fearful reaction, since the apprehension of the interpretative pattern must be based for the perpetrator on evidence from the victim's responses. Figure 40 suggests some commonly recognized patterns for such *scare* scenarios.

The reinterpretation of the stimulus from threatening to benign both here and in *play ambush* also exists in an analogous form in some linguistic and similar forms of humour. While not necessarily threatening at all, a secondary recognition of recontextualization of the information occurs where the communication is reinterpreted from serious and therefore informative to playful and intended for humour alone. Such *only joking* humour may only evoke a response at the point at which the non-serious status is announced. This secondary, dual recontextualization can only occur in certain circumstances. It can not work, for example, when the individual is aware that the stimulus is intended to be amusing, unless the communication or action arouses instinctive reactions (as in *play ambush*) later compensated for at the point of recontextualization.

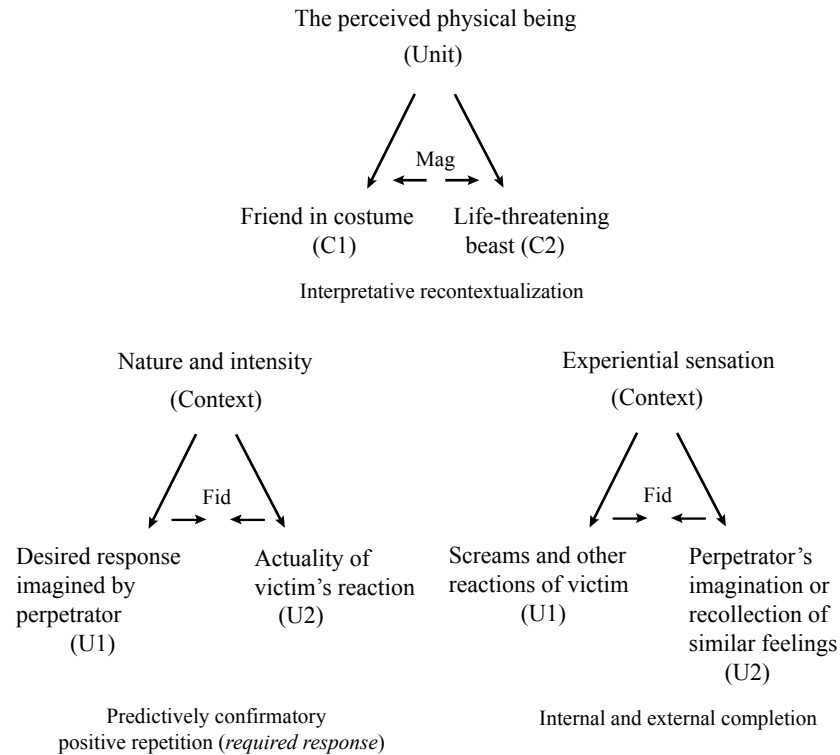


Figure 40: Patterns of fidelity and magnitude mix easily to form compounds, as in this prank humour. While they function differently, they are rarely mutually exclusive. Note how the interpretative recontextualization of the first pattern occurs for the perpetrator from the privileged position of having knowledge of both interpretations. Later this pattern may be *refreshed* for the perpetrator (and potentially be engendered for the victim) by the truth of the matter being discovered or made public.

Qualification

The third pattern of magnitude, qualification, features two mutually exclusive sub-forms. Patterns of this category involve the qualification of a unit without the loss of its identity, in that the varying conditions or states in which the persistent unit is repeated provide it with multiple contexts between which magnitude may be assessed.

The first sub-form, *qualitative* recontextualization, refers to the manipulation of an entity by applying it to different conditions or actions such that some property varies within it. Provided the identity of the unit is maintained, the different states are *qualitative* and become contexts for the persistent unit. They are therefore assessed on the basis of magnitude in qualitative recontextualization.

The units recognized in this sub-form are entities or properties as opposed to actions. Figure 41 presents a simple three-term process of unitary qualification of a man. We may refine the unit here if we wish to *visual appearance of changing man*, revealing a *property* that is qualified instead of the physical entity.

We may dog-ear the pages of a book, perhaps remove its dust jacket or even reprint it in a different font and cover, but if the identity of the book is deemed to remain unchanged, a single unit persists and qualitative recontextualization of that unit will have occurred. This aspect of qualitative recontextualization therefore returns us to the question of identity raised earlier in the volume. I shall leave the debate about to what extent an entity can suffer the variation of its properties before its identity is compromised to the philosophers. What matters here is that the individual's subjective recognition of singularity or multiplicity dictates the unitary identity of the information, not the existence of any supposedly objective interpretation. Consider the scenario in figure 42 in which an animal is awarded the power of speech.

Where the individual may recognize either the same specific camel in differing contexts or judge the variation of properties to enable their generic interpretation of a camel to retain the same identity, then qualitative recontextualization has occurred. If, however, the variation of a property such as the removal of a zebra's stripes were judged by the individual to have altered its identity (rather than merely masking it), the same form of recontextualization could not occur since multiple units are now perceived

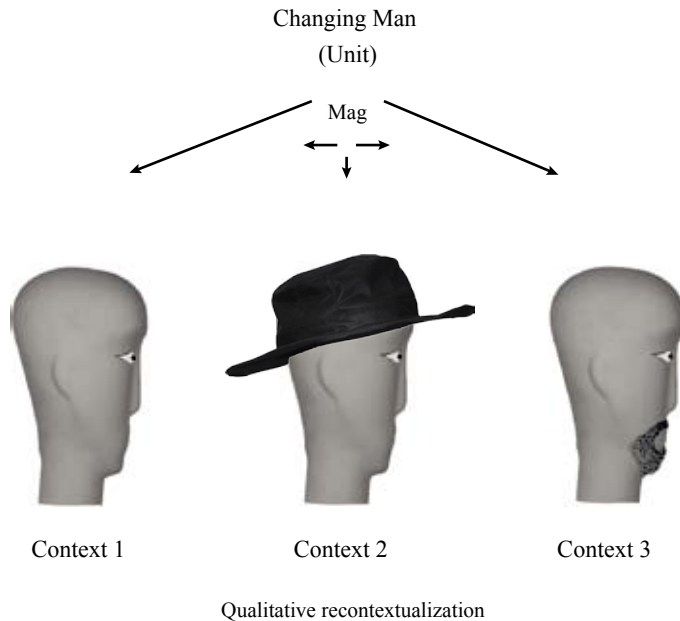


Figure 41: Qualitative recontextualization need not involve any alteration to the fabric of the unit in question. Here the addition of a hat recontextualizes the head's visual appearance to the observer (perhaps as much as the growth of a beard) without affecting any intrinsic properties.

(since the individual presumes the first unit to be a zebra but the second to be something else) where previously a singular identity had been perceived in different states. The individual may then, of course, recognize fidelity between these two units if it is sufficiently significant to activate the scanning process.

Qualitative recontextualization occurs commonly in the perceived disintegration of the physical world, where an interaction with inanimates produces either formal or informal humour (such as *human vs. machine*). Figure 43 depicts commonly recognized patterns when the loss of a door handle prevents the individual from opening the door, by which the variation in properties leads to opposition in the form of thwarted efforts. The recognition of patterns in physical deterioration is an intricate affair, eliciting wide-ranging responses to the same information according to minute changes in perception. Concentrating on the remaining door will generally lead to the

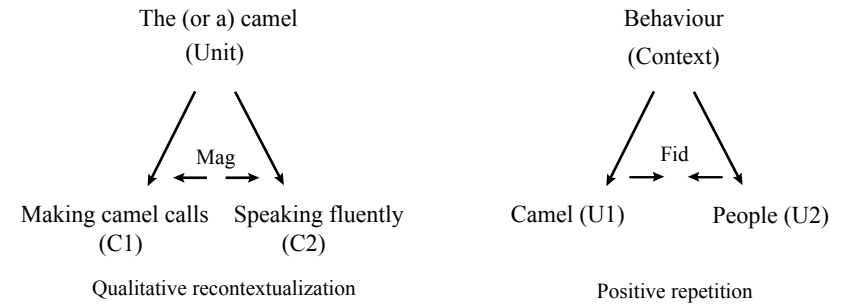


Figure 42: A compound pattern of humanistic behaviour in animals. The qualitative recontextualization of awarding different properties to other species will often lead to positive repetition if the ability is redolent of human activity rather than simply an alteration of the animal's. The latter pattern may also be recognized in animal behaviour without any pattern of recontextualization. Note potentially locational recontextualization (of the power of speech) may also be recognized in such stimuli if *the power of speech* is identified as a unit as opposed to *the camel*.

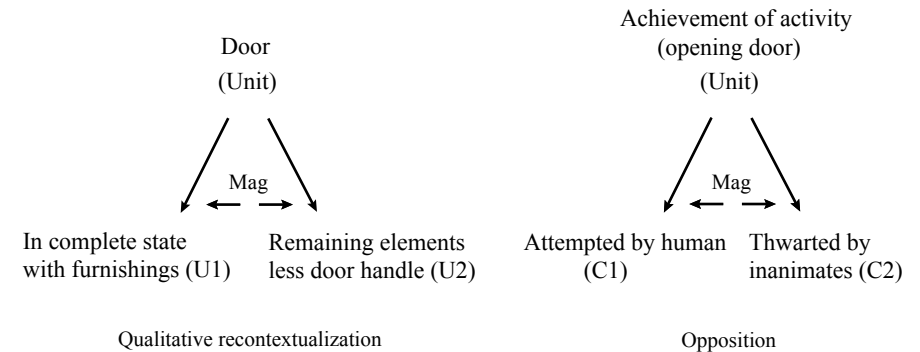


Figure 43: A unit and context representation of a door handle falling off. Opposition combines with the qualification to produce a common scenario. Various other patterns may be recognized in such situations, including positive repetition of a person's failure (see *human vs. machine*) or locational recontextualization of the separated element, alongside minification of the entity's value or potential uses.

recognition of patterns as in figure 43, but turning one's attention to the door handle once fallen may instead lead to minification (of the unit's value), and locational recontextualization (of the handle itself).

Just as we may apply a unit to a certain end, as in applicative recontextualization, we may also apply it in a certain way. By doing so the unit therefore becomes the activity undertaken, and the adverbial context the manner in which it is applied or *executed*. The same process of qualification may now occur as in qualitative recontextualization, except that here it relates to activity and is therefore *executive*. Strictly we can not qualitatively recontextualize an action other than in executive recontextualization, since this requires an action, such as *reading* or *writing* to constitute the central unit, rather than the book itself. The unit and context diagram in figure 44 suggests two different units to undergo executive recontextualization.

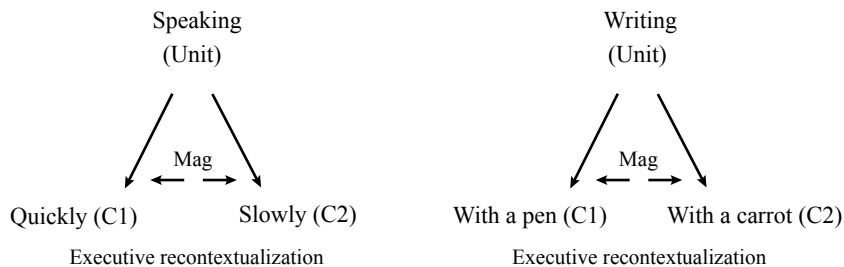


Figure 44: Two examples of executive recontextualization. Any recontextualization may lead to the recognition of further patterns. The second here could, for example, evoke a recognition of opposition in thwarted efforts.

Much *error* humour is based on executive recontextualization due to the different ways in which the same process may be attempted. Consider the scenario in which a subject is walking through a door carrying a second subject in their arms, but fails to align them correctly and bangs their head on the frame.

While there may be a clear pattern of opposition between helping and harming those who are being carried, a more important relationship is also evident. To the individual observing the event it is clear that turning the rider sideways would have prevented the collision, and consequently the

apprehension of two alternative methods for carrying the subject through the door, one as performed in error by the first subject and a second as suggested by the imagination or memory of the individual, may be recognized.

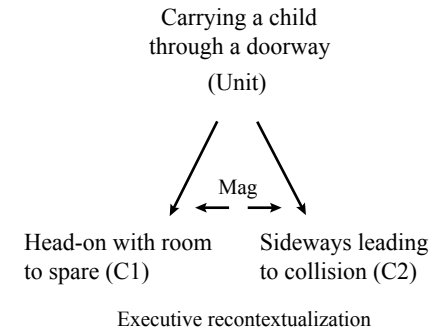


Figure 45: Simple *error* humour as above may be compounded with many further patterns. Note the recontextualization of performing this specific process in different ways involves a latent form of reorientation, not requiring separate expression since it is inherent within this dominant pattern.

Even if the individual does not consciously formulate the precise process by which the alternative successful execution could have been achieved, the elements perceived as causing the failed attempt will still represent a context for performing an action which in their absence would have been successful. In apprehension of this type the unit (*carrying the subject through the door*) could be seen in two differing executive contexts of *without difficulty* and *leading to injury*.

If the process of entering the house ended in actual failure to pass through the doorway (or to get the child inside) we could add *attempting to* to the unit of *carrying a child through a doorway*, leading to its execution in two very different ways: *successfully* and *unsuccessfully*, as represented in figure 46.

Anticipation of failure in this situation facilitates discrete recognition of the executive contexts by presenting both alternatives (how the process could be successfully executed and how it will actually occur) in advance. This clarifies the successful course from which the subject errs, compounding the

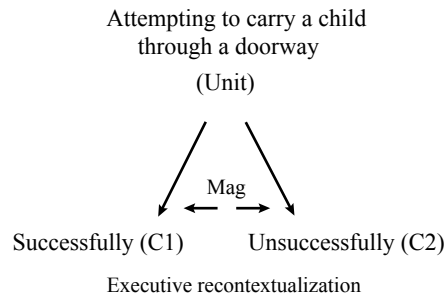


Figure 46: The pattern now exhibits a latent opposition, not requiring separate expression since it is inherent within the executive recontextualization.

pattern with predictively confirmatory positive repetition.

While executive recontextualization goes a long way to explaining much that has traditionally been interpreted as humour being caused directly by failure, it is important to note that it is not restricted to contexts that encompass error. The same pattern that is recognized in the ineptitude of figures 45 and 46 is the same that would be recognized were the subject to perform the feat of carrying the child through the door in an original, successful, potentially even acrobatic fashion. In error there may, of course, be further patterns of minification of the competence or ability of the agent, either from their previous state or from that of generic values compared with their specific paucity, or of positive repetition if their failure is perceived to constitute a pattern of behaviour in *trust you to do that* humour. Equivalently, the sudden magnification of their ability above comparative values would also effect alterations in the intensity of humour evoked.

Returning to the process by which the pronouncement of the individual may become separated from its internal model for various reasons during social interaction, we can now clearly see how, instead of the fidelity caused by a simple perceptual fragmentation, a pattern of executive recontextualization could be recognized if the intended communication is seen in two different states. Qualitative recontextualization may occur between the internal model and the actuality of the words enunciated, or executive recontextualization may be recognized if the process of communication or the delivery of the message varies from internal expectations.

Patterns of qualification are therefore common in *mispronunciation*

(often with *positive repetition*), *mistaken identity* and other *errors*, physical humour including *clowning* and *slapstick*, *face-pulling*, *new hair cut*, *I've never heard it put like that before* and *I did it my way*. Much that has been interpreted as humour caused by anomaly is also explained by this single pattern.

Scale

Patterns of scale involve the repetition of a unit in varying dimensions or extents and apply to properties and actions as much as to entities, and to ideas and processes as much as to physical objects. The magnification or minification that is effected relates to a contextual variety in scale, in extent, in value or in number. Scale differences need not only occur in the dynamic alteration of a single entity, since while we may observe the magnification of an object as it grows, we may also observe the difference in size between two objects. In the example of figure 47 the blood pressure is dynamic and the contexts are both exhibited in a single party.

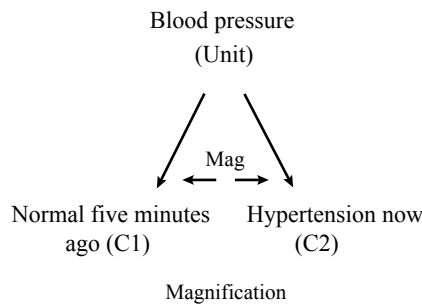


Figure 47: A simple increase in extent leads to the magnification of a value.

If we then choose to contrast the contextual extents of the same property in two different locations we may do so without breaking the single unit rules of magnitude since it is shared by both subjects, who are themselves simply an adjunct of the context. In this second case, referred to as *dual-party* magnification or minification, the static property is the unit observed in multiple varying states manifested in multiple subjects. Effectively what this means is that the manipulative contexts may attain either a temporal or a spatial locality.

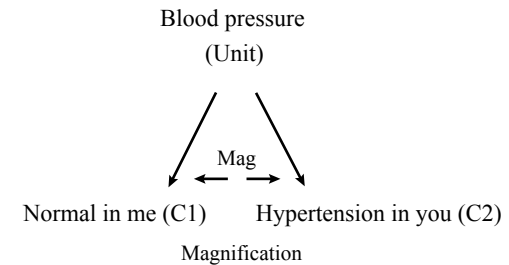


Figure 48: The blood pressure now returns different values in different subjects.

The presentation of an elephant and a mouse in close proximity, or of a particularly fat person next to a particularly thin one, is therefore based not on the comparison of the two animals as separate units but on the recontextualization of physical form, seen in two divergent attitudes between the multiple participants who do little more than provide pockets of information through which structural relationships are perceived. We'll return to this in the next section when we examine the nature of the system more closely and address the illusion of unitary dissimilarity in humour.

Neither context in patterns of scale need be abnormal or uncommon, since it is the difference between them rather than any inherent quality that undergoes assessment. However, as with all patterns, the contextual width may cross generic and specific boundaries alerting the individual to a departure from expected values.

The most obvious example of scale is present in the dimensions of an entity. The *hall of mirrors* features a form of amusement based exclusively on the apparent alteration of visual dimensions, as described in figure 49. Here specific aspects of the individual's reflection are presented in scaled contexts of increased or decreased extent rather than the entire individual as a single unit. As a consequence both minification and magnification may occur simultaneously within the same image, leading to significant alteration of the individual's appearance, which along with further effects of lighting and colouration may evoke ulterior patterns of qualitative recontextualization.

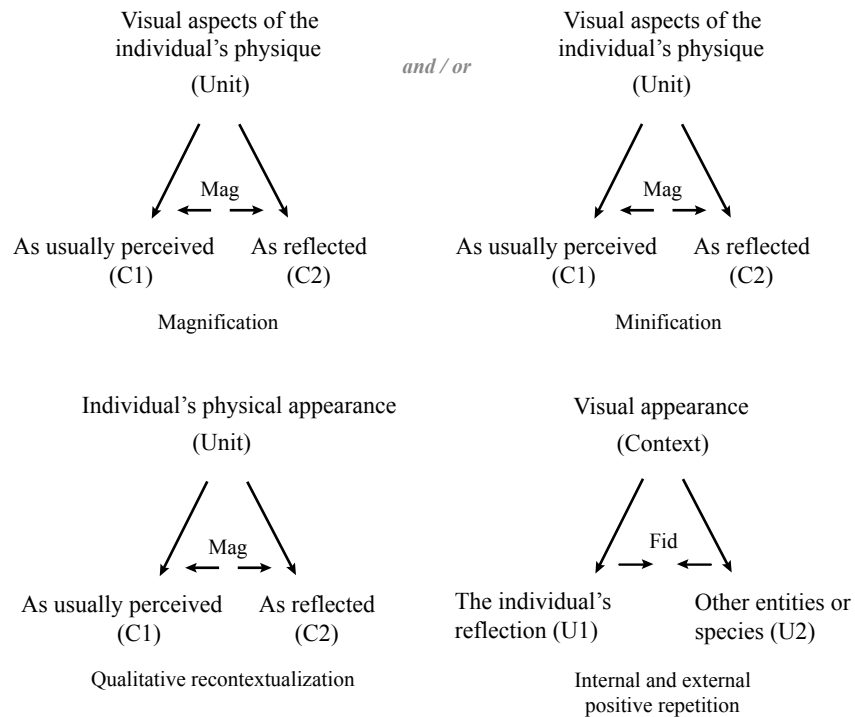


Figure 49: Potential recognition in the hall of mirrors. Beyond patterns of scale, peculiarities of the reflections or the combinations of different sizes may lead to a reapprehension of the visual appearance of the individual as a whole in qualitative recontextualization. Just as commonly positive repetition may occur of their reflected resemblance to other species, persons or entities.

While properties of scale may most obviously relate to measurable values in properties of the physical (such as the results of a blood pressure examination, or the velocity or basic dimensions of an entity), they also relate to experiential sensations enjoyed in varying degrees of intensity by the individual or by a subject they observe. Emotional states may rise or fall in magnitude and are apprehended as readily as the expansion or contraction of a physical entity. Whereas sudden switches between polar states (such as from serenity to pandemonium) may be registered as oppositions if both states exist in clear definition, the scale increase of one extreme may be

viewed as a magnification from a generic or specific starting point if the boundaries are less distinct.

Values recontextualized through different extents may therefore be those presumed or ascribed on a judgemental basis without measurable physical evidence. Returning to the disintegrating door from *Qualification*, its perceived uselessness may now produce a pattern of magnitude. If value or functionality of the door is taken as the unit, its disintegration leads to two variant contexts, one high and either generic or specific before the loss of the handle and one specifically low consequent to its removal.

Some patterns of scale are linked, and as a shorthand may be drawn as a single pattern, called *balancing patterns of scale*. As the name suggests these are compound patterns linked by their inherent compensatory features. Associated by an inverse correlation, as the stock of one party increases, the stock of the party described by the connected pattern decreases and vice versa. It is essential that the actions are causally linked, otherwise separate patterns should be identified. If Subject A wins a game it is a necessary linked effect that Subject B loses, and the same effect may occur while the game is in progress. If Subject B begins to pull ahead, Subject A must necessarily begin to fall behind, and vice versa. Both patterns must be active for the compound to exist, however, and must be recognized simultaneously.

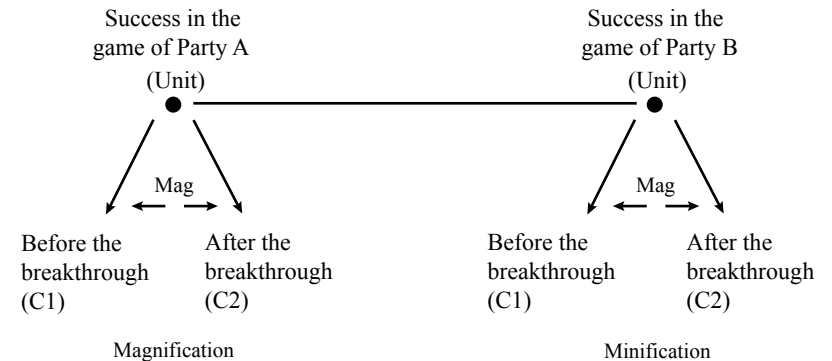


Figure 50: In the above example the increase in success of Party A and the decrease in success of Party B must both register as variations in scale for a balance to exist. Alternatively, a simple dual-party pattern of differing levels of success may be recognized between the two parties on a static basis, but this does not reflect the progression before and towards the moment of change.

In the above depiction the bar between the patterns denotes their linkage. A shorthand version of the pattern may be written thus:

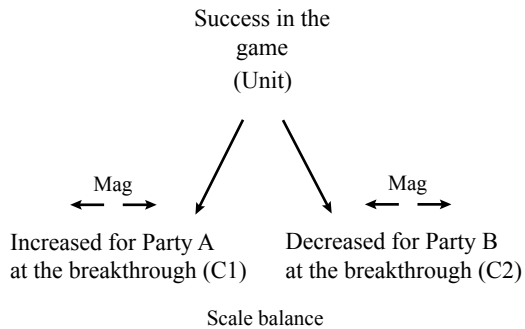


Figure 51: Shorthand balancing scale representation.

Such balancing patterns are commonly recognized between competing factions. Elsewhere, there is a temptation to identify patterns of scale in all human error, due to the metaphorical interpretation of a person looking small as the result of ineptitude but, as discussed later, scale recontextualization is not a necessary component of such humour (see *Illustration*). However, where actions communicate a clear reduction in competence from a generic expectation to the individual's specific exhibition, patterns of scale may be recognized, as occurs on occasion in *falling over* humour.

While some instances of humour do indeed feature dual-party balancing patterns of scale founded on a basis of competition between the two parties, and many others exhibit single-party magnification or minification of personal attributes or qualities on a specific or generic basis, it is important to urge caution in the identification of such patterns relating to experiences, emotions and abstract notions of social standing. While they exist, unless a precisely definable and significant pattern relating to a distinct property can be identified they do not constitute the source of humour. In instances of specific scale recontextualization, a value must be in evidence before an event for it to undergo an alteration in extent that will evoke humour, and in generic scale the specific event must significantly vary from a clear contextual value perceived by the individual to reflect a generic expectation in usual contexts. As with all pattern identification, closer definition and

qualification of the major pattern type will help to clarify the likelihood of its recognition.

There is a second temptation to equate all instances of humour previously identified by superiority theories with the activity of patterns of scale. While many such instances are indeed partially explicable on such a basis, only a small proportion involve patterns of scale reflecting differences between the two opposing parties as opposed to the individual and a generic type. Some have no such pattern at all, and any superiority evoked by the associated event is incidental or consequential to the humour. A person may amuse an audience with a peculiar voice either intentionally or because they can't help it, and while both may amuse equally, only one could reasonably be assumed to feature any perception of superiority on the part of the assembly.

Interestingly, although caricature involves the exaggeration of a feature specific to the individual, the pattern of magnification involves not the contextual variation of the actual scale of their feature contrasted with that as portrayed but of the generically expected scale of such features with the specifics of the exaggerated portrait. The agreement that such a size is an appropriate representation of the subject occurs in a separate pattern of positive repetition, whereby an implicit truth is identified in the reason for the exaggeration.

While patterns of scale afford the ability to minify assets or magnify weaknesses in a put-down, their occurrence in *insult* humour is not necessary, where the common factor is more often than not the positive repetition of *it's so true* in an appeal to complicity of perception between the perpetrator and the observers. Where scale does occur in insults it follows a similar path of specific to generic recontextualization, from the specific context highlighted by the insult to the generic value retained by the mind of the individual. In some cases the implied reduction or exaggeration of the victim's properties from a perceived generic norm may create a pattern of scale regardless of whether the victim is judged to exhibit atypical traits or not. This is only possible where evidence to the contrary does not exist and the conspiratorial individual is willing to imagine or presume such an insult to possess an accurate basis. If a subject is put down as a *peanut brain* there is no necessity to confirm the truth of the statement. The process is a simple minification from a generic type, made specific in its smaller scale for the subject. However, any compounding implicit positive repetition (such as knowledge that the subject isn't very bright) will inevitably increase potential responses.

Returning to our scare scenario from interpretative recontextualization we may now add a pattern of scale where a clear alteration in extent of a definable property occurs. Although there is no necessity for patterns of

scale to exist in such humour the individual may recognize behavioural recontextualizations such as a minification of the victim's composure or a magnification of their physical and vocal reactions. If the victim has been behaving particularly pompously or confidently a pattern of minification of this characteristic is possible, and if they have previously denied their fear (or the existence) of such entities with which the perpetrator scares them a pattern of opposition may also be recognized.

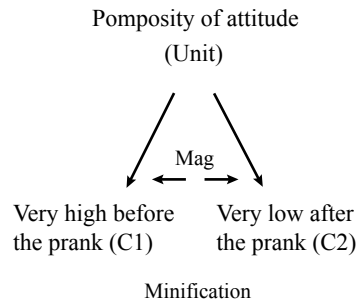


Figure 52: The alteration of a behavioural state through a pattern of scale.

Patterns of scale are less common than might be supposed but still some of the most easily and frequently recognized of all eight in both formal and informal humour, playing important roles in *embarrassment* humour, *comedic antics* (the exaggerated reactions of subjects playing for laughs reveals an instinctive attempt to produce patterns of magnification), *exhilaration*, *velocity* humour, *zooming*, and many others in addition to those addressed here. Note that while the general intention of satire is to reduce the status of or emotionally deflate the subject being satirized, patterns of scale are not significantly more common in it than in any other form of humour (with the obvious exception of the literary work *Gulliver's Travels*). The reduction in status is a result of the humour and its associated commentary, not for the most part its cause.

Although fundamentally a form of qualification, variations of scale are categorized separately due to their distinct origins, as will be discussed shortly.

A Note On Categorization

While the eight patterns as defined here each describe distinct forms of recognition, we could decide to categorize them differently.

In fidelity, for example, since it is the comparative context that is repeated rather than the unit, we could decide to overlook the different mechanistic processes in the apprehension of those units, such as translating them into different media, adding new information to complement them or reconstructing them as a whole, and simply say that one pattern, positive repetition, exists in all cases, some of which require levels of reconstruction and interpretation which the brain is inclined to reward. In each the comparative context is repeated, we might say, and the manner of information surrounding it is of little interest to us.

Equivalently, in magnitude we could pare the system down to its essentials. Since all we require for its apprehension and assessment is the representation of a unit in two differing contexts, we could state that the only pattern required is recontextualization. The unit is repeated through those contexts and a pattern is formed. The information of how this occurs, we could say, is also of little interest to us.

While this would be possible it would also overlook a great deal of the definition of the manner in which apprehension occurs, definition that is important to our understanding of the functionality of the humorous faculty. The method of recognition is almost as significant in evolutionary terms as the mechanism of processing that information and provides revealing cognitive detail about a system that is fascinating in construction. I do, therefore, accept that the choice of eight as here presented is not the only way to interpret the alternative analyses occurring, but am keen to ensure that differentiation in the mechanistic detail of apprehension is not unnecessarily eroded. As we shall shortly see, there are good reasons on both cognitive and evolutionary bases for choosing to separate the eight patterns as above, and while at the mechanistic level there may be similarities between some of them (such as translation and implicit positive repetition), they are made distinct by their origins, applications and scope.

Even with a reduced complement of patterns the student will find it necessary to define the range of contexts in magnitude and the necessary reconfigurations of unitary information in fidelity to assess correctly the activity by which humour has arisen. The process of either of these requires at least some level of definition, much of which I have used to form the generic pattern types as here described. I have, however, also tried to limit

the numbers of patterns by appending details of their apprehension where necessary instead of forming new pattern types where such details are minor or apply to a number of different patterns. For example, predictive confirmation is simply a form of positive repetition, and interpretative recontextualization is a form of application. I hope to demonstrate that the choice of eight is a sane midpoint between under-definition and excessive cluttering, producing a reasonable level of categorization.

Should it be deemed necessary to reduce the set might I suggest that three patterns is the minimum for reasonable purposes of assessment. Application as here described could be combined with opposition since we could reasonably judge the opposing contexts of a unit to involve a reorientation, a reapplication to opposing alignments (although even this overlooks the matter of intensity clearly apparent in such patterns). Qualification could potentially absorb scale, since these two patterns have currently been separated for reasons of clarity and evolution rather than strict functionality. Balancing these two recontextualizations would be the single, substantial pattern of positive repetition.

At the same time as not wishing to appear excessively prescriptive about the categorization of these patterns, those that have been chosen are descriptive of very real processes of cognition, and alteration in their names or number does not alter the processes occurring in the mechanism of humour.

Recognition

An Example In Virtual Space: The Book As Unit

It's time to make some sense of the variety and nature of the patterns as presented thus far. To assist transparency our model of illustration will revolve around this book, *The Eight Patterns Of Humour*. You may, if you see fit, carry out the following instructions on the physical book as you hold it in your hands, but if you prefer not to do so or are reading in digital media, then imagination and a virtual copy are more than adequate substitutes.

Take the book in your hands. We'll start with magnitude, so first turn it upside-down. By doing so you have effected a pattern of opposition, whereby the common unit, the book, is viewed in two contrary states, and while it remains unchanged our relationship with it changes significantly. In this instance by manipulating the book we have effected a change in context, yet we need make no such effort if a second party sits opposite us to view the unit simultaneously. While I hold the book in my hands I see it as upright, whereas a person facing me sees it as upside-down, despite the fact that the book is unmoved. The context we choose as observers will thus dictate the orientation of the unit as we perceive it, and consequently two contrary attitudes towards the same unit will produce an opposition. Both instances of the pattern suggested so far occur on an internal and external basis whereby one of the contexts must be remembered (in the first instance) or imagined (in the second instance) by the holder of the book, yet a third

person, an impartial observer, may witness these contrary contexts on an entirely external foundation by sitting between us. Academically the book as unit may also be viewed in contrary manipulative contexts of varying intensities of *accurate* and *inaccurate* or *good* and *bad* as manifested by its supporters and its detractors.

Now place the book *elsewhere*. The definition of what may qualify as such is entirely subjective but as long as you consider yourself to have executed the instruction you have effected a pattern of locational recontextualization. A foot to the right or on the floor may suffice, but if you judge these points to equate to the same specific location then recontextualization will not have occurred. Next, unless you or others usually store your books there, place it in the freezer compartment of your refrigerator. By doing so you have effected generic locational recontextualization, which while conceptual remains subjective. There is not, and never can be, an objective context for your book. If the identity of the unit is generic the magnitude will be assessed on generic contexts (or a generic / specific contrast) as you perceive them. If it is specific, magnitude will be assessed on the individual unit as observed, from whatever starting point has been established.

With the book back in your hands, twist it so that you are looking at the spine, and then revolve it around the horizontal plane. By doing so you have effected orientational recontextualization, which may, as already stated, lead to opposition in certain circumstances. Revolve it now through the vertical plane, and a second pattern has occurred, with the last unit of the first the first unit of the second.

Now use the book as a door stop, or find some other alternative use for it, in applicative recontextualization. While this process is specific in this instance since you have found a new use for this specific book, the novel use of a book as a generic representative is also possible. What occurs to one may be seen as applicable to all unless we know it to relate to specifics only. Burning this book to keep warm could be specific if its application as a use for this particular book alone, or generic if it is considered an application for all books.⁴

As a reader you will interpret this book as you see fit. Regardless of where you may stand in actuality, permit yourself for one moment a general interpretation of the book as an enlightening and accurate depiction of the

mechanism of humour. Now, from those previous coordinates, reinterpret it as an elaborate hoax. Now, if you please, interpret it back again, in varying interpretative recontextualization.

Next either dog-ear a few of the pages or scribble some notes in the margin, or contrive to spill coffee or wine on the cover. In any or all of these situations you have effected qualitative recontextualization by exposing the book to new conditions that alter its qualitative nature yet maintain its identity. Since the book is an entity rather than an action, we can not effect executive recontextualization on it, although if we allow ourselves the liberty of revising the unit to become *closing the book* we may now do so quickly or slowly, or in any other way we wish. As long as two different contexts for the activity exist, recontextualization may occur between them.

Now hold the book in your hands again and move it first closer and then further away. As you do so the book appears to alter in size. On a perceptual basis units rarely change in scale as we perceive them, yet they do so continually as we and they move towards and away from each other during everyday observation. While the book remains fundamentally unaffected as we move it back and forth, its scale is altered by our perspective, providing it with a new context. This distinct origin of the pattern in matters of basic perception (along with its frequency) is the major reason that patterns of scale are identified separately from alternative patterns of qualification.

Having completed our tour of magnitude, now let's turn to fidelity. Imagine you start to see this book over and over again. First interpret this specifically, in that you keep catching sight of your copy on the desk. Importantly, despite the fact that you are observing the same unit, it arises in these circumstances in the same context, and as a result each instance of apprehension is presumed to be a unit in its own right. The identity of multiple instances as multiple units is discussed at greater length later in this section but in short we may consider it the *observation* of the book rather than the book itself that is repeated as we return to look at it, since there are clearly multiple instances of perception in the same circumstances whether there is only one book or not. Unless we have specific evidence that it is precisely the same copy of the book that has been repeated, we will process the perceptions as multiple instances anyway since they remain within the same manipulative context, and by doing so recognize positive repetition.

Next interpret this generically, whereby the name of the book is mentioned repeatedly by different people you meet or multiple copies of it turn up in different locations or are lined up on the shelf next to each other. Now there is no potential confusion regarding singularity and multiplicity since the unit is the generic publication and not a specific copy of it, yet

⁴ A further level of generic and specific definition is possible with some entities, books being one. This specific book to which we refer may be either your precise copy or the publication known as *The Eight Patterns Of Humour*, where the generic type is the concept of any book. Alternatively, the generic form could be recognized as the book known as *The Eight Patterns Of Humour*, while the specific is your copy of that publication.

each instance of that unit's occurrence remains identical to all others when compared. Alternatively imagine the book in a bookstore next to a different book by a different author which while distinct from *The Eight Patterns Of Humour* effectively states the same theory, with the same major points. Even the covers resemble each other. While clearly different entities, the similarity between the two is recognized and assessed for fidelity in positive repetition.

Now imagine you have two copies. Tear one into chapter portions and then lay them out separately in front of you beside the complete copy. By doing so you have effected division. Note, however, that the segments must remain separated. If you merely replace the chapters into the form of a book the fragmentation is incomplete, and you have instead effected a qualitative recontextualization of the single copy. Alternatively, take your single book and rip it into chapter portions before viewing them separately with a five second delay between each, creating the same pattern on an internal and external basis, whereby the undivided unit with which to compare the torn version is supplied by your memory.

Now turn the book into a drama, dance or picture. By comparing the two units in analogous forms a pattern of translation is effected. It's important to note here that the process of translation effects the existence of a new unit. If, however, the individual deems the identity of the book to have remained the same, the differences between the new contexts may instead be assessed for magnitude in either executive or qualitative recontextualization. The assessment of whether the identity has persisted is entirely subjective, but it could occur, for example, if the book were simply translated from one language to another or transferred from physical to digital media. It is highly unlikely, however, that the same generic identity could be presumed to have persisted into a picture, although care must then be taken regarding the definition of units, since the identity of aspects or tenets of the theory may persist as abstract concepts to be assessed for magnitude in their new contextual settings. The identity of the book itself, however, has not persisted, and consequently multiple units exist for comparison.

Finally, place the book in the middle of a line on the shelf. As a part of the library the unit has become an element in a larger unit, and we may compare the two states. Now remove it and place it under a pile of books allowing only a corner to be apprehensible. With this corner as the unit, now imagine the whole. In both processes we have effected completion of our unit, first on an entirely external basis and then with a mixture of internally and externally originated information.

We have now manipulated and compared our book through the full range of perceptual and analytical devices available to the faculty of humour.



These eight patterns we have just enacted have provided humankind with a control desk, a virtual console, for the comparison and manipulation of units. Far from comprising an arbitrary collection of descriptions of humorous phenomena, they exist for specific cognitive reasons, constituting the platform for all perception and imagination. We may choose to express them differently or to alter their categorization, but however we present them the functions they represent remain unchanged.

The range of the eight patterns enables the brain to identify connections between parcels of information, to identify common factors within them and to compare, categorize and manipulate the units in which they exist. Providing tools for both basic mathematical assessment and syntactical manipulation, the patterns reflect the entire range of actions it is possible to effect on any unit. Any activity an individual can undertake falls within their remit, providing a virtual network for the assessment and application of any information.

Interestingly, time is not recognized as a manipulative context for the perception of units, and consequently if identical items are repeated at different times they will not be automatically judged to possess the same identity. Multiple instances, multiple units, will therefore be apprehended instead of one. There are simple cognitive foundations for this phenomenon. Were alterations in time to be registered as alterations in context, the passage of every moment would provide a new context for every unit apparent to the brain, and their functions and applications would require continual reassessment. Without a new context, the continual presence of a unit presents no novel information to the brain and requires no further attention.

It might also be noted that subtraction does not exist within the range of patterns. This is for basic epistemological reasons. Since the addition of any information to an initial unit is a form of completion, adding knowledge that something has been removed is effectively an addition of detail regardless of its apparently subtractive nature.

The Scanning Process

So how does the brain make sense of all this information? To understand the activity of our virtual console further we need a brief examination of the scanning process, which, as with all aspects of humour, is fundamentally simple in nature yet potentially complex in activity. The details of the process must inevitably involve a degree of conjecture. Whether we consider the information presented by the faculty to be simultaneously analysed by other cognitive processes or fed into the system at a nodal point in a perceptual chain will raise further questions due to uncertainties in our comprehension of basic intelligence. If the faculty occurs as a nodal point for all information, at what point in the chain is it located? If it runs simultaneously, is the information being fed to multiple processors therefore duplicated (and, if so, when and how) or simply accessed by different faculties simultaneously? However, we can assume the presence of certain components due to the functionality of the system, and suggest a basic information scanning process that functions in the following manner.⁵

Three channels are open to information being processed, as mentioned at the beginning of this volume. Channel 0 is the default, through which information continues unhindered. There are then two further channels to humour networks representing the two main systems of relationship assessment, and it is the process by which the allocation of units to one of these channels is effected that we will now address.

Units are the only building blocks available to the brain and all are judged of equal weight and value as their allocation is determined. However, default channelling occurs to any information considered continuous, unchanged, or otherwise presenting no indication of novelty. Familiar bits of information will not be processed unless represented alongside novel comparatives or in novel contexts, and consequently the majority of perceptual input will fail to activate assessment of any kind. The same visual information is expected by my brain as I walk into my study each day, and unless the presentation of that information alters in manifestation or is unexpected or surprising in its occurrence, it will bypass the system without evoking further activity. Most information is not new, and will consequently cease to be assessed unless it changes in some way or is evoked as a comparative for a different bit of novel perception. The vast majority of information will therefore pass

through the system without stimulating a response.

Once information has been identified as of note, however, it must then be allocated to one of the two active networks. Since contexts are simply manifestations of application, the first information that occurs to the brain is always the first unit, and we can represent this by placing it as the first event in the pattern on a triangular unit and context diagram, either at the top or the bottom left. As analysts we may not be certain at this stage whether singular or multiple identities have been identified by the individual (or even, indeed, if a pattern will be formed), but the direction the diagram takes can be decided later. Either way, we can ink in the initial unit that has been considered of interest by the processor:

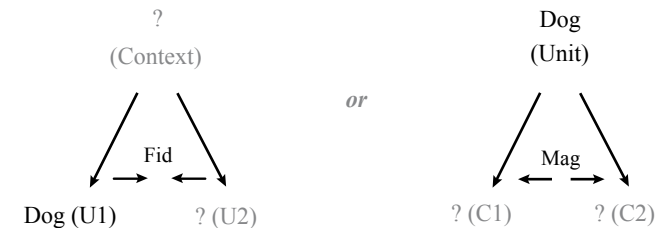


Figure 53: Units are necessary for any assessment to occur, whether of fidelity or magnitude, and consequently units are always recognized first, regardless of the relationship later identified.

This information is then transferred to a holding network for allocation. The next process is that all units, all available bits of information from all internal and external sources, are scanned for similarity to this primary unit, and any that arises does so automatically due to a connecting factor that will then form the context for their comparison. An important operating principle of the system is that initially all units are presumed to be separate and multiple unless the brain has reason to consider the identity of multiple instances in fact to be singular. Via external perception or from information called to mind (such as a memory evoked by the primary unit), a second unit arises exhibiting similarity to the first. We have no reason to presume that the two units are in fact just one presented in different contexts and consequently they are treated as multiple identities exhibiting similarity, and are selected for channelling to the first active network of fidelity.

⁵ I am not attempting to claim that this is the only system via which the faculty could operate, but having designed numerous models I hope my selection of this one will appear justified due to its economy, simplicity and scope.

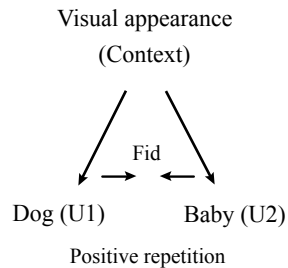


Figure 54: The first triangular representation from figure 53 is here developed into a full pattern of positive repetition.

Once the multiple units as represented in figure 54 arrive at the network their fidelity is assessed and the significance of the pattern is established. This information, including a reference for the pattern and the value of significance, is then transferred to the response mechanism where the intensity of reward is determined.⁶

Returning to the holding network, if the brain instead possesses evidence to suggest that the multiple instances of information are in fact the same unit presented in multiple contexts yet maintaining the same persistent identity, it (along with its contextual manifestations) will instead be channelled to the second active network of magnitude. For two units to be assessed as possessing the same identity they need to do much more than simply resemble each other, since thousands of units may take exactly the same form yet not share the same single identity. The brain requires substantial evidence that this is the case. Qualifying evidence may consist of the fact that we have recontextualized it ourselves or witnessed its occurrence either generically or specifically (perhaps we have held it in our hands during the process) and are therefore assured of its singular identity, or other detailed knowledge of the unit enabling us to confirm that it must in fact be the same one repeated, such as a uniqueness of nature. In all other cases multiple units with separate identities are assumed. Where the repeated unit appears within the same manipulative context it is default channelled from the holding network, but where it evinces clear variations in context it is forwarded for their assessment. The unit chosen for channelling to the magnitude network is also assumed to have a generic, rather than a specific,

nature unless evidence exists to the contrary. This is the second important operating principle of the system.

Once at this second active network the unit is assessed for its contextual magnitude as represented in figure 55 and the significance of the pattern is established. The same transfer of information to the reward mechanism then occurs as in instances of fidelity.

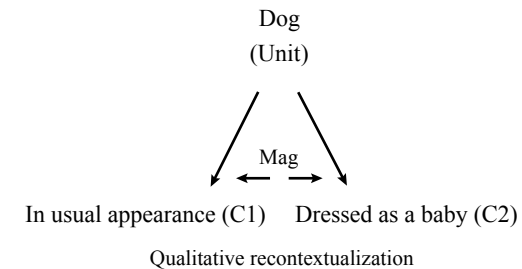


Figure 55: The second triangular representation from figure 53 is here developed into a full pattern of qualitative recontextualization.

With surprisingly few qualifications this is the entirety of the system, as summarized in figure 56. The active networks may operate simultaneously and presumably for any number of patterns at any time. Values of significance returned by the networks then enter a common channel on their way to the response mechanism, where other factors help determine the intensity of the response, but even once values have been registered and forwarded at the final stage of figure 56 there may still be no reward engendered. Not yet represented on the diagram is the continuation of information after it has been processed by this system since it is unclear whether the initial channelling involves the duplication of information or not, or whether the information present within it may be accessed by other faculties as it is assessed by humour. If its presence in the faculty is an unduplicated detour we must assume its later return to the same path as that followed by default channel 0.

Although simple the system features several interesting aspects that help to facilitate unconscious analysis. The first major quirk is the assumption of multiple identity when units are first being sorted, which while appearing misleading does not in fact lead to confusion over how many units exist,

⁶ This not insubstantial aspect of the theory, the mechanism of the humorous response, is addressed at length in the *Complete Edition*.

as may at first appear to be the case. Returning to our diagram of the *blues* (figure 29) the assumption of multiple identities in the instances in the first example will not produce confusion over the numbers of units involved. Any manipulative context remains dormant (as we found with our coffee cups in the cafe) until it is activated by recontextualization, such that in figure 29 it is only when we interpretatively recontextualize the word that the recognition of singular identity is of any import. Once we do so, multiple instances of the same unit are seen in different interpretative contexts and a generic identity is presumed such that the brain automatically identifies just one unit instead of two (ut infra). It can not, in fact, logically identify polysemy if it considers two units to be present.

Familiarity with entities in the possession of the individual or further afield will usually lead to a knowledge of persistent identity whereby singularity is identified when the unit appears on multiple occasions in the same context, preventing any confusion over how many items they possess. Returning to my study each afternoon I am aware of the persistent identity of my chair, my desk and other accoutrements and therefore do not identify them to possess different identities from when I last saw them. However, when arriving at a colleague's house to discover she has the same chair and desk the presumption of multiplicity applies, and, since they arise in the same manipulative contexts (ut infra), fidelity may be assessed.

It may sometimes appear that multiple instances of the same unit have been considered multiple units, but this is due to an inaccuracy of unitary definition. The repetition of *blue* in figure 29 or the repeated appearance of an adult's face in a game of *peek-a-boo* (both based on the comparison of multiple units) does not lead to assumptions that there is more than one adult or more than one word known as *blue*, simply that multiple actions or vocalizations have occurred. The unitary multiplicity occurs not in identity, but in the instances of perception, and fidelity is assessed. When a person puts their head around a doorway repeatedly it is not the head itself that is repeated⁷ but the occurrence of its fleeting. Consequently multiples of the action are recognized instead of a single unit to be recontextualized. Repeated spying of our virtual book on the desk is not indicative of multiple books, only of multiple instances of observation, and it is this observation that forms the unit.

This arises due to the recognition of singular manipulative contexts. Assessing the multiple instances of the word *blue* in figure 29 as a single unit

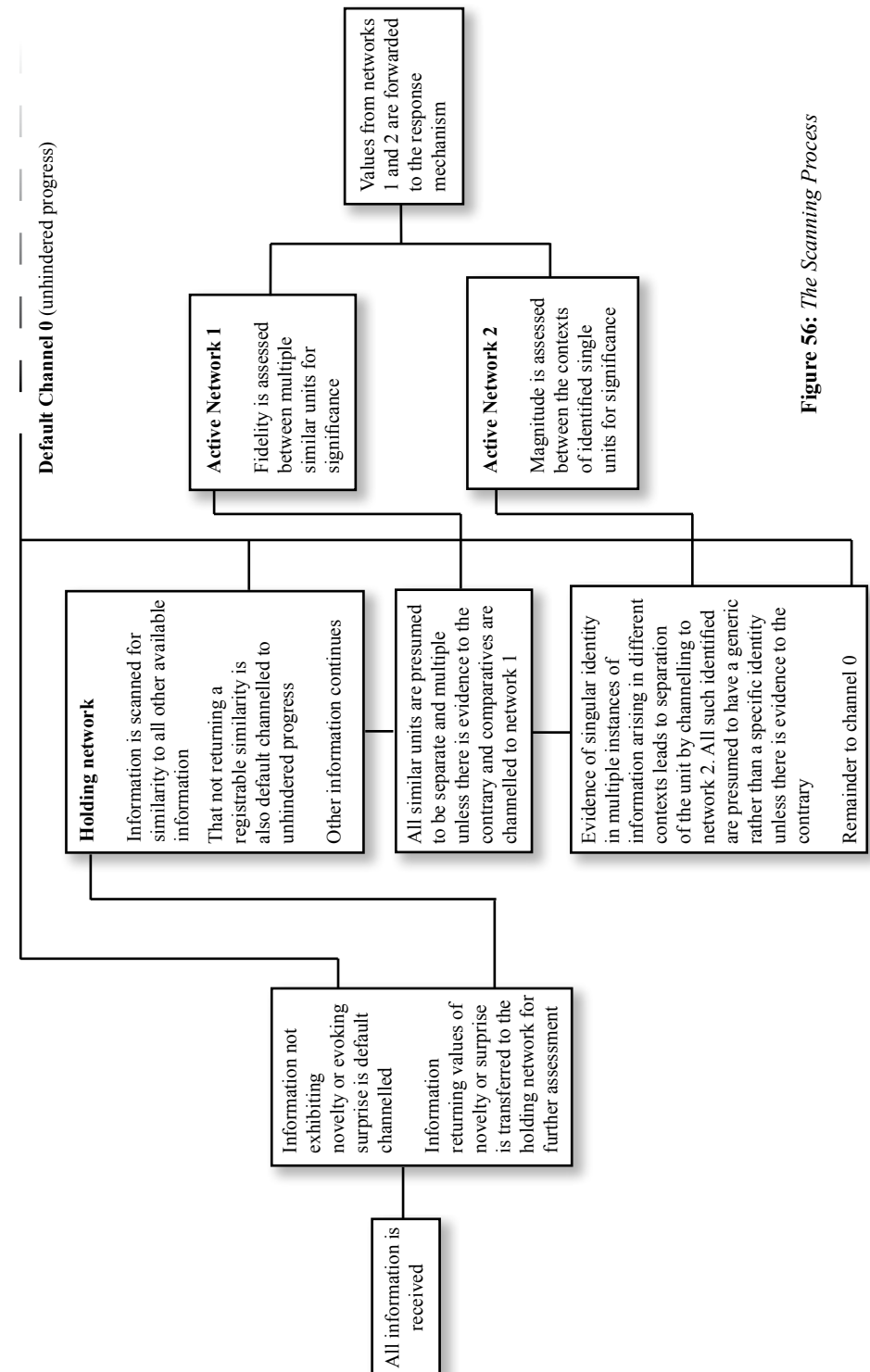


Figure 56: The Scanning Process

⁷ However, it may be locationally recontextualized back and forth around the door and correctly assessed for magnitude on that basis in addition to the fidelity of the repeated action.

would of course be fruitless since no recontextualization has occurred from one to the next, meaning there is no magnitude to be assessed even if we try. To save wasted effort, multiple instances are therefore assessed as multiple units if they remain within the same manipulative context. Our multiple perceptions of *blue* all occur within the same context (one interpretation) but if the context changes the unitary assessment switches to singularity, and magnitude is instead assessed on the contexts in which the single unit of the word *blue* has been interpreted. Since the unit has remained identical and has been identified in a new context, it is presumed to be a single unit with multiple applications, and is awarded a generic identity. Similarly, the fleeting of the head around the door maintains the same manipulative contexts in each instance and is therefore identified as multiple instances of an action.

This brings us to the second interesting facet of the system: the presumption of generic identity of singular units unless evidence is present that the unit is a specific. Unless the brain knows it is in fact the same specific unit, with the same persistent identity, generic identity will always be presumed once the single unit has been separated out from other information. While it may or may not be the same nail that is actually being recontextualized, the *concept* of a nail will be that which is presumed to have been recontextualized unless the individual knows that it is one nail in particular, and even then there must be a good reason for presuming the recontextualization of that particular nail to be important compared with its generic role as a representative of all nails.

The benefits of these quirks are easily illustrated. Having observed an oak tree in one garden the individual may move to the next and observe a second. We will presume for the purposes of illustration that oak trees are very rare in the individual's locality, so the information is deemed novel and not default channelled. The two trees are automatically presumed to be separate and multiple and are consequently assessed as such since they appear to arise in the same contexts of application, interpretation, orientation and scale. Further, because they both arise in gardens, their location is also judged to be generically the same. The information is therefore forwarded to the fidelity network for assessment of significance, where the comparative context could perhaps have been *occurrence in locality* (due to their rarity) or any other particular similarity perceived. However, even if the brain identifies them as belonging to a different context as far as location is concerned (since they are 50 feet apart), the process of analysis then presumes their relocation to relate to the generic concept of a tree, not the first tree viewed, and, again, no magnitude is assessed in their generic relocation since they remain in the

same generic location of *gardens*.

Observing this second oak tree the individual then visits the next garden and finds a third, this time being used as a launch pad for amateur rockets and self-propelled projectiles. For illustrative purposes we'll presume the individual has never seen an oak tree (or perhaps even a tree) being used in this way before, and the information is transferred to the holding network for further assessment. Now, unlike in the first comparison, the oak tree is clearly apprehended in a variant manipulative context of application, recontextualized from its usual or prior status as *background garden foliage* (or however else the individual has judged its applicative context) into a *launch pad and general projectile work station*. Since multiple contexts have been observed, the multiple instances of the oak trees lead to the assumption not of multiple identity but of singular identity, as per the second major quirk of the system. Since there is no evidence that this is in fact the same specific oak tree (there is a great deal to suggest otherwise), this singular identity is awarded a generic status, and magnitude is therefore assessed on the concept of an oak tree (or quite possibly just the wider generic *tree*) being recontextualized through these different applications.

By simple conditions and basic networks the system can therefore achieve surprisingly complex analysis without conscious interaction. As an economical, unconscious process scanning all information but reacting to only a small proportion, it may then alert the conscious mind to matters of interest through the humorous response, encouraging similar cognitive activity.

The process described above informs us not only about the faculty of humour but about the manner in which all novel information is processed by the human brain, and how complex relationships are developed from the apprehension of simple units.

The Fidelity And Magnitude Relationship

The forces described in figure 57 below reflect the central functions of the humorous faculty. This dual force, with both of its aspects continually expanding the individual's options whether it seeks increasing similarity of unit or dissimilarity of context, is at the centre of the system's flexibility.

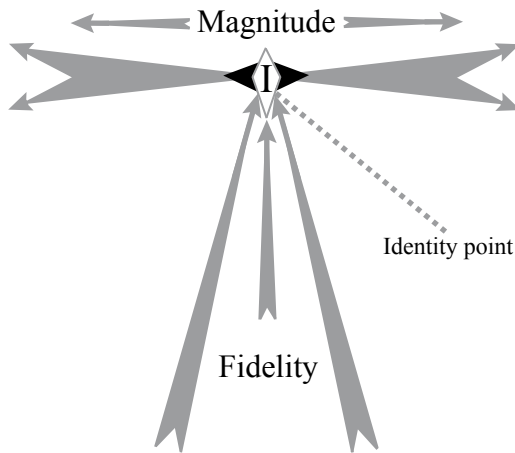


Figure 57: *The fidelity and magnitude intersection.* Greater similarity of units through fidelity leads eventually to the identity point where identical instances may be comprised of either singular or multiple identities. Once singularity is established the previously active forces of fidelity switch to those of magnitude, which proceeds to widen the contexts for the single unit outwards from the identity point.

The single context in fidelity ensures the units are convergent in fidelity, but the multiplicity of contexts in magnitude ensures the unit inhabits divergent states. Fidelity and magnitude therefore exist to optimize potential uses of units. Together they form a system founded on accuracy of identification with expansiveness of application, honed to finding the most appropriate resources (in fidelity) and then being as resourceful with them as possible (in magnitude).

The crossover of the two forces occurs at the *identity point* as depicted

in figure 57, reached by multiple instances of information appearing identical. At this point multiplicity is exchanged for singularity, and the forces attracting cognitive activity undergo reorientation as the unit and context relationships on which they act are reconfigured. Multiple units are never in fact recontextualized in magnitude for the simple reason that recontextualization requires the same information to be repeated in a different context. Consequently even multiple units are reapprehended as singularities since they undergo the same alterations in application as a single group.

However, the subjectivity inherent in the scanning process produces alternatives of interpretation that enable different individuals to assess the same stimuli (but not the source) for patterns of either fidelity or magnitude depending on subjective perspectives. The consequent differences of assessment (and the general tendency of individuals to favour either form or pattern in different media) account to some extent for what is individual in a person's sense of humour. Since units and contexts change depending on the focus of the individual's perception, so too does the tendency to identify patterns of fidelity or magnitude. Consider the following diagrammatized representations of the same action viewed in alternative relationships of fidelity and magnitude. First, perceptual bias leads to a recognition of a pattern of magnification:

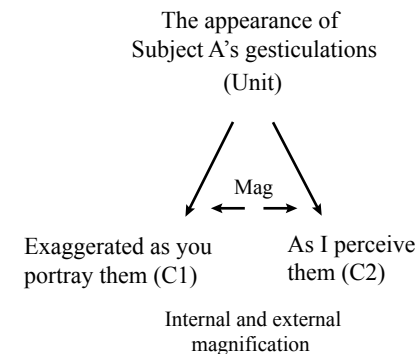


Figure 58: Exaggeration is found appealing in patterns of magnification. The greater the exaggeration, the funnier the portrayal.

As already discussed, there is a difference between mimicry and caricature. A scale pattern of this form would normally belong only to the

latter and would be accompanied by a pattern of implicit positive repetition, a conceptual agreement that Subject A gesticulates in an excessive fashion over and above the generic type. Alternatively, without any exaggeration in the portrayal, differences in perception and information processing mean the same stimulus could be recognized as a relationship of fidelity:

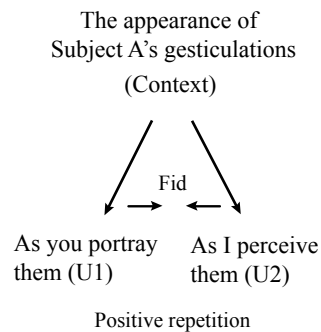


Figure 59: A simple alteration in perception has changed the same stimulus from a pattern of magnitude to a pattern of fidelity. Note the very clear exchange of contexts and units in this example would not usually be quite so neat (or even possible) elsewhere.

In these examples we have interpreted the unit and context relationship differently. Essentially these differences of interpretation have arisen because of the question of identity of the first perceived unit. In figure 58 we have considered Subject A's actions to be conceptually the same between how I view them and how you portray them in all but their scale, and have consequently been drawn to a pattern of magnitude since they are the same item viewed in different states. *The appearance of Subject A's gesticulations* is therefore the only unit to be identified, a unit which when repeated is reproduced exactly except for new contexts of differing scales.

In the second example, however, we have viewed your portrayal and my image of Subject A as fundamentally different units for any range of reasons conceptual or perceptual. As a consequence we are drawn instead to a pattern of fidelity, and compare the two units together in the comparative context of their appearance. The first unit I identify is therefore your portrayal, and since it is a separate unit in my perception from the manner in which I perceive John to act, my retained image of his behaviour forms a separate,

second unit with which we compare the first.

This has, clearly, major implications as far as individual reactions to stimuli are concerned. The subjectivity of perception means the individual may remain unimpressed by a presentation that someone else finds raucously amusing if they are drawn to a different unit and context relationship. At the identity point of figure 49, *the appearance of Subject A's gesticulations* is interpreted either as a single unit in multiple manipulative contexts or as the comparative context by which multiple units are assessed. No objective alteration of the information has occurred yet subjectivity will dictate that our responses are distinctly different.

The pattern of magnification in figure 58 will not impress an individual seeking a pattern of fidelity since it has significantly altered the representation in comparison with a more accurate mimicry. While the same gesticulations are identified, they are exaggerated in a manner that renders them unappealing to the fidelity seeker. Equivalently, an individual seeking magnitude in comic exaggeration will remain unimpressed by a precise, naturalistic rendering of the information as might be identified in figure 59. The choice of which the individual seeks is based on the apprehension of units in the scanning process, and interpretations for the same stimuli may undergo revision if new evidence of singular or multiple identities is presented.

The role of evidence is therefore vital in matters of unitary identity. Consider first the singular identity of an individual who, having left the room some minutes previously, returns with their hair styled differently. Now compare this with the multiple identities of two individuals who look identically similar except for different hair styles:

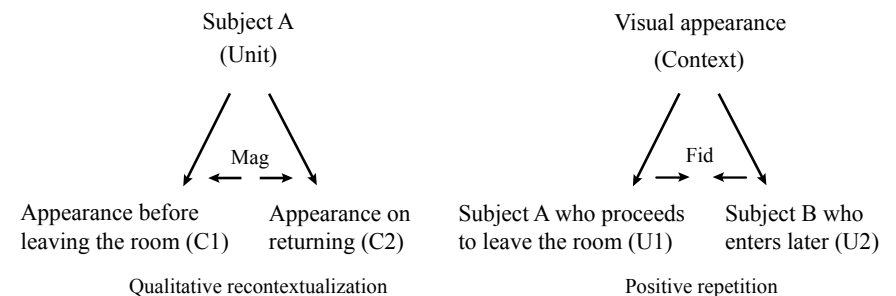


Figure 60: In the first diagram Subject A alters their hair before returning to the room, whereas in the second the subject is replaced by a different person bearing a similarity to the first.

Again, the individual's judgement of what is occurring on the basis of unitary identity dictates the potential for recognition of either fidelity or magnitude. When Subject A returns with their new style, evidence of their singular nature means that their identity is selected as the unit to be recontextualized through any qualitative variation.⁸ The individual recognizing this persistent identity through the different guises therefore assesses the magnitude of their qualitative manifestations.⁹

However, if when Subject A returns the individual judges the new appearance to belong to a different person, a separate unit from the one who left a few minutes earlier, magnitude will no longer be assessed. Instead, the visual similarity of the two units displayed may be assessed for similarity in fidelity. The apparent alteration in the hair style from the first interpretation will then appear less significant since the similarity of the two units becomes the attractive force.

There are, therefore, two very different reactions to the scenario. In the first instance, the greater the variation of Subject A's appearance the more significant and (all other factors remaining equal) the more amusing the pattern of qualitative recontextualization will appear. However, in the second interpretation, the similarity of Subject A and Subject B is what will form the pattern, and so the greater the increase in differences the less significant and less amusing the pattern of positive repetition will appear. Conversely, the smaller the differences in the first instance the less significant the pattern of qualitative recontextualization, and the smaller the differences in the second the more significant and more amusing the pattern of positive repetition.

Now, if we rewind a bit, once Subject A has left the room a third person, Subject C, who is Subject A's identical twin, enters instead. Many of the observers presume it is Subject A who has returned and on discovering their mistake recognize both interpretative recontextualization of the stimulus information and positive repetition as the similarity of the two subjects being compared.

8 It is quite likely that this knowledge of persistent identity would in fact mean that the unit being recontextualized would become much more narrowly defined than the identity *Subject A* (which reflects the whole person), perhaps to *facial appearance of Subject A* or similar. This then allows for the unchanging nature of their remaining body and clothes not to reduce the impact of their qualitative recontextualization of limited aspects, which, while changing the way they appear facially and perhaps are recognized, does not change their entire physical appearance from top to toe. Many illustrations in this volume employ either units or contexts that would require significant redefinition in specific usage. The narrower they become, the more accurate the analysis.

9 Note the important role of conditioning in such circumstances, whereby minor changes to a conditioned appearance will appear more significant than major changes to an unestablished one.

The important point here is that humour is a subjective process, and the individual's perception of identity is at its foundation. If we presume for one moment that the 'true' scenario is in fact that there is only one subject (Subject A), our failure to recognize this could lead to the mistaken enjoyment of fidelity between two individuals when we are in fact only comparing the same person with themselves. Further, if we presume the second scenario to be the true one, any failure to recognize that there are two different individuals (while also potentially leading to further error humour) may also lead to mistaken patterns of qualitative recontextualization of the single individual, and the more dissimilar they appear the more significant the pattern would become.

This same subjective judgement of identity applies to the apprehension of any information. If two instances are judged to possess a singular identity in different contexts then magnitude must be assessed, and if they are judged to possess multiple identities then fidelity will instead be sought. The tendency to recognize either fidelity or magnitude is consequently affected by individual perceptions: of the single or multiple identity of repeated instances of a unit, and of the similarity between those multiple units or the dissimilarity between the multiple contexts of the single unit.

If a person suddenly acts like a small child throwing a tantrum, there are two different dominant patterns that may be identified depending on the individual circumstances of the occurrence. The first is positive repetition of an infant's behaviour, facial expressions or vocalizations. Alternatively, a question of focus of attention and judgement of the performance means the same information could lead to the recognition of qualitative or interpretative recontextualization of the adult person instead. Both may be present and either may be dominant or just one may exist, and while there is no conscious choice of which to recognize the perceptions that dictate which are present are subjective within the confines of the system. Recontextualization will only occur if the tantrum is perceived to display a significant variation from the subject's prior or usual behaviour since otherwise the information will pass unnoticed or register only weak significance. If the subject is known for behaving immaturely elsewhere in life a pattern of positive repetition may instead be recognized of their usual attitude arising unexpectedly in play form. Finally, there is also scope for executive recontextualization to be recognized if the performance is noticeably poor or original.

While the identity of the unit has a major impact on the recognition of patterns there are further cognitive influences on the selection of units and contexts. The process of apprehension of the subject matter affects the individual's selection of units due to the focus of their attention. The

units the individual concentrates on become established in the mind and are more likely to be registered as those to be varied, compared or recalled when comparatives arise. If we return to our camel of figure 42, the individual's attention may be dominated by either the idea of *speech* or the idea of *the abilities of the camel*. If the same information occurs after a human is depicted unable to speak, then locational recontextualization of the power of speech is likely to be recognized as dominant since it has become established as a primary unit in the brain. If, however, the sketch appears after a different selection of abilities of the camel (or lack of them), qualitative recontextualization of the camel may be recognized first and foremost when speech then occurs. Further, presenting the camel speaking after a human who acts in a similar way may lead to the recognition of fidelity in positive repetition (of their actions and appearance) alongside or instead of magnitude in the location and behaviour of camels generically. Consequently the direction of the individual's attention will affect their interpretation of the stimuli since different units may become established in the mind ready for comparison or manipulation by concentrating on different aspects of the material. While humour is unconscious, as discussed later, the processes by which stimuli are observed are not, and an alteration of the individual's conscious attention will inevitably lead to the absorption of different information and consequently different patterns.

The establishing of units in the mind will therefore affect what is most likely to be recalled by the scanning process at the point at which similarity of units is assessed in the holding network. If you and I are conversing about a local river before its name is mentioned, perhaps because we are walking beside it, and you proceed to refer to it by a different name (whether intentionally or mistakenly), I know to what you are referring since the unit is established and your new linguistic tag effects a qualitative recontextualization of the physical body of water beside us (potentially compounded by an executive recontextualization if I perceive your tag to constitute an error). The river is the established unit and the linguistic tags are merely contexts through which it is viewed.

If, however, we are standing in my study and you refer to a river by a certain name, it is this linguistic tag which is likely to become established as the unit since I have no knowledge of the true identity of the body of water to which you wish to refer. When I then discover that we've been thinking of different rivers because you got the wrong name, the pattern recognized is applicative, not qualitative, recontextualization. The correct physical body of water to which you wanted to refer, the one beside which we had earlier walked and which had formed the unit in our first conversation, is now just

a context for the application of your incorrect tag, which also applies to another context, another river, to which it correctly refers. It should be noted that the name you use to refer to the river and the river to which you wish to refer could remain the same in both of these examples, yet the unitary relationships the scenarios produce are significantly different.

The relative strengths of patterns will also affect the apprehension of fidelity or magnitude. Where recontextualization is minor it may not be recognized. The repetition of the underlying unit may still evoke fidelity, however, because, although repeated in multiple manipulative contexts, their weakness will lead to no registrable significance. If I employ a certain facial expression when referring to a mutual acquaintance, this may be found amusing in translation and positive repetition (*it's so true*). If I then apply the same look to a different person, while translation and positive repetition may still occur for the new information also, unless there is a significant difference between the contexts of its application (the different subjects), recontextualization of the facial expression will not be recognized and, instead, a third pattern of fidelity may be recognized in the simple repetition of the amusing look. The factual difference in identity of the subjects to which it has been applied is thus insufficient to produce magnitude in isolation.

As students of humour the judgement of whether fidelity or magnitude has occurred is an initial challenge, although the use of triangular relationship diagrams encourages a relatively accurate estimation of the probability of significance being recognized by the individual. There are various comparative tests that can be performed on the material to aid clarification further. Destructive punning, for example, functions via the fidelity of phonic properties, not magnitude of form. The pun *cranespotting* instead of *trainspotting* exhibits a pattern of positive repetition in sound between the two first syllables of the referents (which also form patterns of positive repetition not of interest to us here), whereby *cranes* (for whatever reason) and *trainspotting* are combined in a single destructive expression. It does not, as may be presumed, function via a single qualitative recontextualization of trainspotting. The final destructive formation does not seek variation from the original expression but the greatest possible similarity to two distinct referents in a single form. Were it to seek magnitude, the greater the difference from the original expression the more amusing the pun would be, and this is clearly denied by simple illustrative comparison. *Caravanspotting* is more dissimilar from *trainspotting* than *cranespotting* yet (according to judgement) a much weaker pun. *Propanespotting* exhibits greater similarity than *caravanspotting* to *trainspotting* and *terrainspotting* is more similar still, while *hearsesplitting* exhibits significantly less, so although judgement

must remain subjective there is a clear attraction to fidelity in this form of humour. Indeed, we could corrupt the original expression endlessly without achieving a pun at any point unless phonic similarity to the two referents occurs. Testing the nature of attraction in instances of humour by comparing them with similar instances of increased or decreased similarity in this way, while still open to misinterpretation of unitary relationships, is a relatively basic but widely applicable tool for guiding unresolved or unclear analyses.

Another important check is the question of unitary definition. When penguins walk in lines towards the shore positive repetition may be recognized between their behaviour or appearance and that of human beings', leading to an assessment of fidelity. We may, however, be tempted to identify magnitude in the locational recontextualization of a trait, but for recontextualization to occur the unit must remain the same throughout both contexts. We could therefore perhaps define the unit as *human locomotion* and claim that it exists in both contexts of *human being* and *penguin*. While this is possible it is unlikely the brain would recognize such a unit as being repeated with the same identity in both since, unless its meaning is substantially stretched, it is not, for the simple reason that penguins effect *penguin locomotion*. Between the two separate units of the penguin and the human, however, a similarity is then recognized in the fidelity of locomotion or associated visual appearance or attitude, and humour may arise. It is not, of course, the difference in locomotion that is identified and found amusing between the two species, since almost all other birds (and the majority of the remaining animal kingdom) would produce a more significant pattern on this basis. In a different situation, however, a specifically human-based ability, attribute or activity may be artificially relocated to an animal, producing a clearly defined unit of, for example, *playing cards* or *drinking whisky*, and thereby produce a pattern of magnitude through locational recontextualization.

As raised earlier, it is also important to consider that there are limits of viability to both fidelity and magnitude that will affect the individual's tendency to recognize them. The *boundaries of magnitude* are such that, if the recontextualization stretches the individual's trust in the singular identity of the unit, recontextualization will fail and two separate units will instead be identified, which may or may not impress us with fidelity. We may award a camel the power of speech or cats the ability to play chess, but if our property allocation is viewed subjectively to alter the fundamental identity of the unit, the individual will be unimpressed by its magnitude, presuming the recognition of no ulterior patterns.

Interestingly, suggested contexts are first considered for their viability but once they have been discounted as useful applications the possibility of

magnitude becomes active once more regarding error. Releasing a context from the burden of viability by acknowledging that it has been considered in error recategorizes it as something to be considered for different reasons from the usual purposes of pattern recognition. No longer a potential solution to be assessed for its appropriate use of materials, the pattern becomes a lesson in failure, an example of how not to order and manipulate the world around us, and the unit becomes the activity of locating a context for the preceding unit, viewed in different contexts of executive recontextualization.

Similarly, there is a question of *unit viability* in fidelity. If the individual considers the suggested unit to be fake or incorrect, its apparent fidelity to the primary unit will be of no importance. Such boundary and viability issues account for many instances in which the individual complains that the humour *doesn't work*.



There remains a certain dominance of fidelity over magnitude due to the difference in their natures. Any instance of recontextualization may potentially be absorbed into a meta-pattern of positive repetition by simply repeating it in a similar context. Recontextualization of a repetition, however, while clearly not impossible, is much less frequent. Such a recontextualization would have to involve the whole pattern, not merely a unit of that pattern, which is significantly different and much more frequent. The infantile repetitions of complex recontextualization in *face pulling* or *tower block demolition* are clear examples of fidelity's dominance as the defining meta-pattern.

This dominance is a reflection of the superiority of units over contexts. In fidelity we examine multiple units in the same context, and in magnitude we examine the same unit repeated in multiple contexts, yet in both fidelity and magnitude we consider the unit to be the essential component of the pattern. Why should this be, when we effectively reverse the situation when we switch from one to the other? Why should we judge only units to constitute the useful proportion of the repetition, the constructive material on which we should concentrate, when it is the comparative context that is repeated in fidelity?

The answer is not difficult. Neither comparative nor manipulative contexts can exist independently of the unit. Manipulative contexts, whether applicative, locational, interpretative or otherwise, can only be recognized because of a unit presented within them. Comparative contexts only arise because two units have been compared, and only exist within the confines of

that linkage. Once we separate them, they disappear. We cannot use a context, and neither can we alter its constitution. The only manipulative entity at our disposal is the unit, and it is by that manipulation (whether effected by ourselves or by an external agent) that contexts are engendered. Our tool is the unit and since we can only act on it and not on a context our interaction with it is of paramount importance. Humour has accelerated our ability to act on units by identifying them in unfamiliar contexts or when unexpected but we cannot utilize a context, we can only apply a unit to the confines of that context or assess its effect on the unit in question. We therefore follow units as the dominant lead at all times, and every new context accounts for little more than a record of that unit's potential uses.

However, this should not mislead us into thinking that the units with which we deal must be concrete entities. We may take an abstract or generic comparative context such as *human physique* (see figure 64) and later consider it a unit, but in neither case can the context(s) exist without the unit's primary recognition. Fundamentally, a unit must exist before a context can be engendered, but this does not mean that units may not be composed of abstract properties or generic forces.

What the differences between the apprehension of fidelity and magnitude tell us is that humour remains a flexibly subjective system despite its precise and universal mechanism. The choice of identification of initial units and the assessment of their singular or multiple identities produces a remarkable range of potential responses that may vary not only between one individual and the next but between a single individual's instances of exposure to the material in which they find amusement.

Similarity And Dissimilarity: The Illusion Of Equal And Opposite Forces

Repetitions, patterns of information, are the fundamental constituents of humour. Regardless of the role of the context, it is the similarity of units that powers its mechanism, whether in fidelity, where the similarity may be relatively weak, or in magnitude, where it must be absolute in order to register a single identity. The *dissimilarity* of units does not attract the attention of humour at any point, and nor does it contribute to the mechanism by which it functions. Yet an illusion makes it appear that it does.

It is inaccurate to think of the networks of fidelity and magnitude as representing equal and opposite forces. The similarity identified in fidelity is not in fact balanced by an equal attraction to dissimilarity (as identified by the forces of magnitude) pulling in the opposite direction, since the relationship of units and contexts is different from one to the other. In fidelity different units are compared for their similarity, and in magnitude, rather than comparing different units for their dissimilarity (which would constitute a contrary system), the same unit is repeated with precision of identity through different contexts. At no point in the system of humour is the dissimilarity of units either recognized or rewarded, since it is the repetition of the unit, not its alteration, which is of cognitive and evolutionary benefit to the individual.

Many prior theories have disagreed, since the recognition of either anomaly or incongruity is generally considered to require the observation of such a dissimilarity. Why then does *pattern recognition theory* insist the system must be based on the attraction to similarity? Could it not be that both the similarity of multiple units and the differences between them could form a system for cognitive analysis as the basis of the humorous faculty?

Without the separation between units and contexts exhibited in the processes of fidelity and magnitude, a system that incorporated equal attraction to both similarity and dissimilarity of units would feature a logical redundancy requiring convoluted and potentially dangerous limitations to avoid permanent stasis. Consider the following diagram in which both ends of a sliding *similarity / dissimilarity* scale are attractive to the individual, who receives equal rewards for the recognition of either:

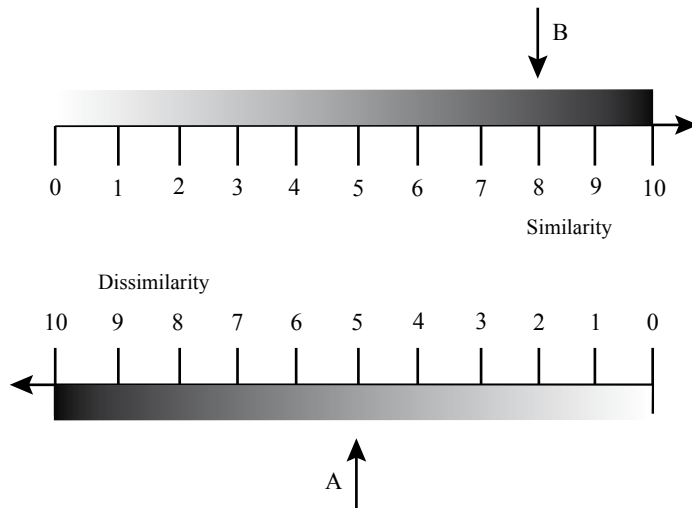


Figure 61: Attracted to both similarity and dissimilarity, a system returns the same value at any point. Points A and B both return a value of 10. The values on the scale represent both the degree of similarity or dissimilarity registered and the reward received.

Because the criteria by which the results are assessed features the attraction to both ends of a sliding scale, the results are invariable. That which is especially similar is awarded a high value on the scale of similarity but a correspondingly low value for dissimilarity to which the individual is also attracted. Since it is impossible to score one without the other, any point at which assessment occurs will necessarily return the same value. A faculty rewarding (and consequently attracted to) both particular similarity or dissimilarity in this manner will produce stasis, since it will be unable to identify any result as any more beneficial than any other. In figure 61 the value of 10 will be returned no matter which point is chosen, even those midway along the scale where neither property is expressed in a remarkable form. Any such system is, of course, redundant.

We may attempt to refine this scale but it is difficult to do so without the continuing inclusion of some level of inconsistency. In the following version the mid point returning values of 5.0 on both scales in figure 61 now

forms a conceptual equator allowing increases of value in either direction:

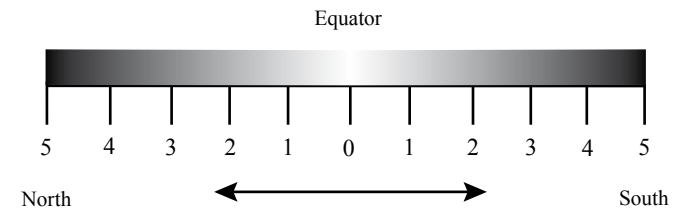


Figure 62: An alternative equatorial scale of polarities.

While it now appears permissible to return only a positive score towards either North (arbitrarily representing dissimilarity) or South (representing similarity), this is possible only due to the existence of an equatorial point from which to measure relative distances and the nature of descriptive references as opposed to attractive forces. What our scale does not depict is the implicit negativity of polar values, whereby a value of 1.0N must also necessarily equal -1.0S. Once the process of *attraction* is involved, the ability to move from pole to pole on the same scale becomes a necessary component of our descriptions. The value of N reached by travelling 7.0N from the South pole must necessarily be accommodated by either the reference -2.0S or 2.0N, but in either situation the scale of northward direction must already have begun the moment the south pole is departed. As a consequence the northward attraction must be referenced throughout the southern territories. Despite circumambulation we have returned to a simple state whereby contrary but equal forces located at the poles would keep all equally attracted entities in permanent stasis.

One way in which we may attempt to achieve a system accommodating two equal and opposite forces is through the imposition of a *de minimus* value for registration of either dissimilarity or similarity, whereby a dead zone returns no value. To circumvent the power of contrary attraction we could therefore draw our scale as appears in figure 63.

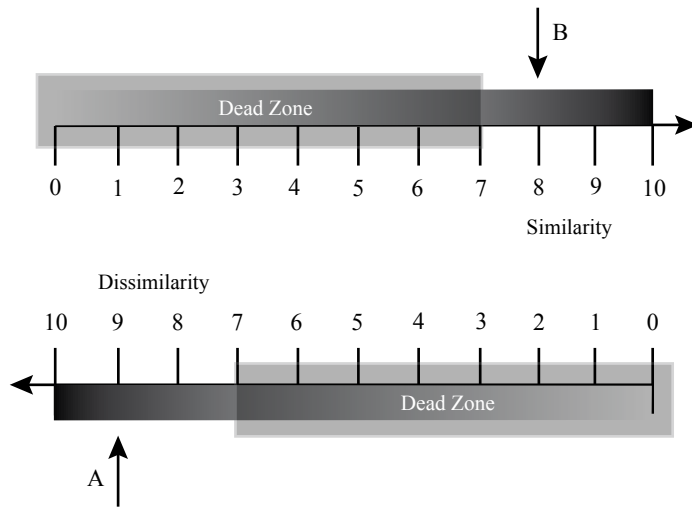


Figure 63: A dual-scale system featuring dead zones negating reward below a certain value for either polarity.

The two dead zones now facilitate results returning only 7.0 or greater. While we have now designed a system that is logically viable, we have raised further problems regarding functionality and survival advantages as an evolutionary reward system. Equally attracted to turning both left and right, the brain still has no indication of which activity will benefit its chances, and is once more held in stasis. Further, any such system is active only at extremes, removing the possibility of subtle recognition. It is equally difficult to imagine an evolutionary condition in which both the absolute presence and the absolute absence of any entity is considered of value but its moderate supply is not. One further difficulty of construction is that similarity and dissimilarity must be recognized on different scales, perhaps even by different faculties, for the dead zones to be able to function independently of the positive rewards for the opposite force. Since both must involve the full range of the scale for purposes of recognition, this involves precise duplication of the same system, and all information would have to be fed to both scales simultaneously for analysis. While we may have escaped a logical difficulty, we have created many new practical, cognitive and evolutionary ones.

The difference between systems of equal and opposite forces and that

expressed in fidelity and magnitude is that similarity remains the only force via which the unit is assessed in *pattern recognition theory*. In magnitude the perfect repetition of the unit facilitates an analysis of that unit's identical existence within contexts of greater dissimilarity, and the scale on which such dissimilarity is assessed is therefore separate from the process of unitary analysis.

As a consequence the analytical system of humour is not based on the recognition of dissimilarity of units at all. This is for very good reasons. Since beyond the recognition of generic types all things are individually dissimilar, reward for its recognition would become increasingly redundant, actively discouraging categorization and hierarchization, which are possible not because things exhibit differences but because they can be associated by similarity. For a moment let's consider simple observational evidence. Beyond the similarity of generic form (the basic physical structure common to all human beings), the capacity for the observation of dissimilarity is greater than the observation of similarity. On walking down a busy street specific visual similarity between the persons the individual observes is rare, yet remarkable when it occurs. The similarity of two such persons forming units externally (or the similarity of one externally observed subject to the image of another retained by the individual), is highlighted perceptually and potentially rewarded with the humorous response. On the other hand, dissimilarity of persons viewed in the street is common and unremarkable, and any such event is considered of no analytical or observational import. The dissimilarity of two external persons (or of one subject's dissimilarity to the image of another retained by the individual) produces no valuable information for cognitive analysis and no reward is forthcoming. However, it may appear at times that this is indeed the case, and here we must address the illusion of equal forces.

Where it does appear that units are assessed for dissimilarity the cognitive process is instead one of unitary repetition through contextual variety. A more detailed examination of the above scenario involving the dissimilarity of two specific subjects will help to clarify this. While they exhibit specific dissimilarity (producing no cognitive impact) they do exhibit a generic similarity, which also evokes no interest since it is neither novel or of interest. When two specifics exhibit similarity a result is returned, and when they exhibit dissimilarity it is not. However, where a specific significantly departs from the generic type, a result may be achieved. In this instance, our subject looks particularly different from other people in the street due to their choice of clothing. Are we not, therefore, comparing generic and specific units and identifying dissimilarity between them?

Again, we must return to redundancy. All specific units that exist anywhere *not* falling within the generic type will exhibit dissimilarity to it, and will all do so with a greater significance than those falling within the genre, including the specific who has departed from the genre to some extent but remains within it. Consequently all visible entities in existence (from microbes to galaxies) are more different to the generic appearance of a human being than our single oddly dressed subject. The attraction to locate and compute increasingly significant differences from a generic type on such a basis would lead to exactly the same chaos as dissimilarity to a specific: an endless, futile and impossible task, and quite possibly the failure of the individual to attend to necessary conditions of their survival.

The error has arisen because we are once more dealing with a single unit, not the comparison of two. The idea that the brain alerts the individual to the differences between multiple units in any circumstances is an illusion, created by the process by which the faculty assesses the extent of difference a unit exhibits *from itself*, not from something else. It is not the dissimilarity between two units (the generic type and the specific instance) that is remarkable here, but the contextual width of the same unit, namely clothing that is worn in the street or the appearance of a human being, exhibited in two different contexts, one of which is here generic and the other specific. The same item has been qualitatively recontextualized and the magnitude is assessed. The structural relationship under examination has shifted such that the units are very different from those apprehended in the visual similarity of two separate persons. The distance between contexts in magnitude leads not to a contrast with any possible state of any unit but only to those conceived as a context for that specific unit within the constraints of the nature of its application. These barriers of definition represent the boundaries of magnitude discussed earlier, and prevent redundancy of contrast such as that between multiple units. As a consequence we are not attracted to the dissimilarity of two specifics, nor of two generics, nor of one specific from one generic, and no factor of self-negation arises in the assessment as would occur in the models described in figures 61 and 62.

Equivalently, for reasons of redundancy the brain is not attracted to similarity of contexts for a unit. While more compared units will return dissimilarity than similarity, producing no particular benefit and a phenomenal waste of time, all objects not manipulated into a new context will return a similarity of context at every moment. Were the brain to be attracted to such a result in any single unit all units would permanently return values of interest, and vital cognitive discrimination would fail, resulting once more in the redundancy of the system and, if unchanged, the species.

So how does the brain know that the relationship has shifted, that different rules now apply, when analysis shifts from fidelity to magnitude? The answer is that it doesn't, and doesn't need to. In the case of our oddly dressed subject, no similarity is returned between multiple units and so single units are assessed for magnitude instead. Since no specific person exhibits contextual width, wider units are those identified and assessed. This time (whether simultaneously to the zero return from specific similarity or not) multiple contexts are returned for *clothing* or *human appearance*.

Consider a further example. If I state that I think the woman who lives next door looks like someone famous and you disagree, you may laugh. Is this not once more recognizing a dissimilarity of units? Could the comparative context, instead of forming a connection, not form a disconnection between the two units instead? Again, the illusion is getting the better of us. First there is no such thing as a logical disconnection that can occur in multiple units, since if it does so it is therefore common to both and consequently an active connection between them. Rather than comparing two external units for a thing that may be absent in one of them, we are instead recognizing a property that enables us to contrast the two, and that property, counter-intuitively, is singular identity. In both cases (mine and yours) the same information has been provided with different interpretations. I have observed the woman next door visually and provided a context for that information that associates her with a famous person; you, observing the same, have come to very different conclusions, and have contextualized her as completely undistinguished.

The comparative context in this example is visual appearance by which I have identified a repetition. Were we to attempt to employ this as a context for disconnection, almost all apprehensible units in the visible world would register a greater and more amusing disconnection to the neighbour than the famous person I have suggested, quite probably including a large proportion of the human race. Consider two friends, one of whom is substantially overweight while the other is substantially underweight, arousing humour in observers due to the differences in their stature. A greater dissimilarity exists between the thin person and a pair of binoculars or a stone wall than between the thin person and the fat person, yet this (unless other patterns are recognized) will not evoke humour. This failure of dissimilarity to other objects tells us that it is once more the same thing that is appearing in both subjects and that, rather than multiple units exhibiting dissimilarity, it is merely the context of that single unit that has changed. It is here that the repetition occurs and the surrounding information, the people displaying extremes of human build, are merely contexts in which that information can be expressed. Note the difference between the two diagrams below, and

why they possess such different implications and lead to entirely different analyses:

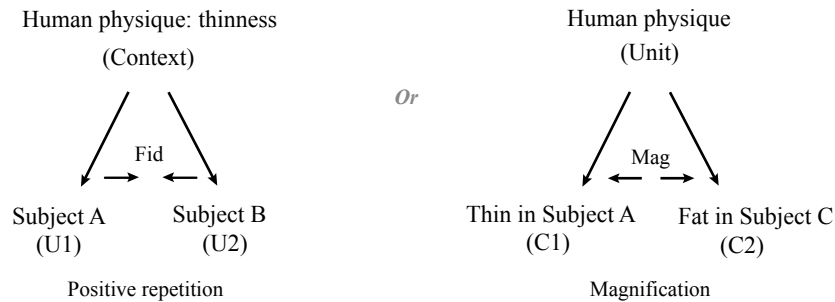


Figure 64: Since a comparative context must exist in both, it is a logical necessity that there is a similarity to the two units in the first diagram, and the context informs us of its nature. In the second diagram, however, the same unit may be expressed in different contexts yet retain its identity because it has simply been manipulated through different states.

No similarity is returned by the comparison of the units in the second diagram. Reassessed for magnitude, however, a unit is located in different manifestations. But why do the diagrams have to change the location of unit and context? Why can we not simply call the unit in the second diagram the context, and represent its expression in two different units, such that two units exhibit a difference on the scale of human physique? An accident of generic relationships in apparently multiple subjects has led us back to our illusion.

Were we to attempt to implement it, the context in such a reversed diagram would have to denote a *scale* on which the units were contrasted, unlike in the first diagram where the context identifies a specific connection. Let's return briefly to our basic process of scanning. Initially all the brain scans for is a level of repetition between units. Contexts do not exist until the two units have been compared and have exhibited a common value or until that unit has been applied in some way (such as a tool is applied to a certain job). As a consequence the brain can't scan for contexts without first locating a unit in which to identify them; they simply don't exist independently. Once identical repetition has been identified in the available information, the brain may scan the contexts of those instances (potentially comprising one or more

identical units) to see if they differ. If they do, singular generic identity is awarded to the multiple identical instances. Consequently the brain does not scan for contexts before this stage in the process. Indeed, scanning all multiple units for varying contexts would be an endless, futile process since nearly all different units would exhibit different contexts of one sort or another from each other. Since the greatest dissimilarity comprises absolute absence in contrast to absolute presence, scanning for scales on which different units return divergent values is a potentially infinite process, whereas, as we've seen, identifying the manipulation of a singularity is not.

In pattern recognition the brain identifies similarity between the two persons in the first diagram due to the repetition of properties clearly apparent in both. In the second diagram, instead of searching for disconnection, it searches once more for repetition. Not returning any values of similarity for the context identified in the first diagram, it does however recognize that the human form has still been repeated in both subjects. While familiar repetition of this generic sort will generally pass through the system unhindered, we can assume that the information apprehended here is considered novel or of some interest to the brain, perhaps because it has never seen the friends together before, and it continues to analyse similarities that elsewhere would fail to evoke interest. This simple recognition of repeated form is awarded a singular generic identity since it is then identified as presenting differing manipulative contexts of scale. The system is therefore enabled to recognize these different contexts once the singular unit has been identified, and for that reason the *human physique* must constitute a unit since it is expressed in two different degrees.

However we attempt to rewire things, altering the structure of the diagram leads to one or more problems for the activity of the system.¹⁰ Any two units, excepting those of absolute similarity, can be artificially bound by any disconnection we desire so how and why would the brain select the contextual scale by which to contrast the units, and why select the units that it does? Units are separate, independent entities untied to contexts until we make them so by comparison or manipulation. In systems employing the context as a scale for differences the identification of the unit also becomes inconsistent, in that two plates being compared would constitute units but one plate that is broken would instead become a context for two different units representing its states. This unitary dislocation removes all meaning from the idea of context since the ends to which things are put

¹⁰ I have designed numerous alternative systems in an attempt to find a more efficient alternative but have been unable to do so. Extensive analysis of these systems appears in the *Complete Edition*.

must become the units for analysis of dissimilarity. While any unit and context relationship can be described by the system we've established, this alternative system starts to crack when applied outside basic relationships with ambiguous terms in certain pattern types. Using a spoon to perform two different functions provides it with two contexts in exactly the same way as awarding it two different sizes achieves the same relationship. The spoon as unit (whether generic or specific) is manipulated to different ends, and attempts to reverse this so that the spoon becomes a scale by which two different applications are viewed as contrasting units starts to become illogical. Since the context of a unit can only occur consequent to that unit, it is significantly difficult to imagine how a spoon could logically come about due to contrasting applications which, we must presume, exist for some other reason unconnected with it. Equivalently, awarding my hand signals to you two contrasting interpretations provides them with two distinct contexts, and reversing this so that the interpretations exist as units independent of the context (the signals) that engendered them is illogical.

Having addressed unitary definition to some degree earlier in this volume we have now discovered the problems associated with inaccurate definitions of contexts. Instead of seeing the expression of *human physique* in different subjects (A and B), the contexts should be formed of attributes located within those subjects, not the identities of the subjects themselves, which could be misconstrued as units. Taking human physique as the unit once more but this time reapplying it through different contextual interpretations reveals our error. The interpretations to which it is applied are backgrounds for the unit and do not exist without it. To reverse this situation and refer to *mammalian structure for bipedal locomotion* and *inadequate system for flying* as units to be contrasted on the scale of human physique is, again, nonsensical (whatever we may think of them as interpretations), because the interpretations (as units) must precede the concept (the context) they interpret. To deny this means we must allow a situation in which a *context* exists without or prior to *texts*, which is logically impossible.¹¹ Wherever generic units are expressed in varying physical forms this error is possible, and care must be taken to refine the unit and context relationship to ensure such inaccuracies do not cause problems during analysis.

¹¹ Note this does not function on the same principles as the game in which different interpretations of a word are provided and the participant has to identify the common factor. Here the conceptual solution to which each applies provides not a manipulative context but a comparative one, identifying the common property in each. The supposed interpretations are not, in fact, interpretations until a unit is contextualized within them. Until that point they are new and independent units of information, awaiting their own contextualization by a common factor, a category of connection.

It would therefore be incorrect to quote multiple units as those in which a scale is expressed in differing degrees, and we must maintain the location of the unit at the apex of the diagram in magnitude. Manipulative and comparative contexts are not the same thing, and it is a mistake to attempt to equalize them. It is only by the reversal of the diagram to its original orientation that the forces of attraction are allowed to change, and the analysis begins to make sense.

For the faculty to provide a useful, productive contribution to perception, there must be a reason for contrasting the different sizes of the subjects in this and all other examples, and this is their scope of context for the unit. Scales by which all incoming units would be compared and contrasted produce major problems for simple network activity, needlessly complicating the processes of analysis, where specific connections and singular units produce a simple, powerful system capable of remarkable versatility. Humour enables the recognition of the similarity between one unit and another and the dissimilarity between the two states of a single unit. The dissimilarity of multiple units is therefore unimportant, as is the similarity of contexts for the same unit.

Neither, in fact, does the process of recontextualization equate to the concept of anomaly. Magnitude functions by the recognition of the variety of the context of a single unit but only a limited proportion of such recontextualizations exhibit traits within the material that would traditionally have been considered anomalous. Granted, the contextual variation of the clothing in the street from the generic to the specific above could be said to do so. Elsewhere however, such as when an interpretation of information is presented in two alternative forms or a perceptual reorientation occurs, definitions of anomaly are inadequate for the process of recontextualization as it occurs to the faculty.

While there is no facility in humour for the recognition of dissimilarity between units, if the individual compares two units and does not judge them to be similar in a certain context they have effectively identified dissimilarity. However, conscious attention would have to be directed to the units in question in order to identify this state because any such dissimilarity would not be registered unconsciously by the mechanism.

There are compounding evolutionary foundations for the system eschewing the selection of dissimilarity, since the basis of adaptability is fundamentally the pursuit of similarity. This lack of adaptive value in the identification of dissimilarity may initially appear counter-intuitive, yet in order to adapt to new circumstances the continuity of the same properties, the same values, the same necessities, must be recognized in novel circumstances,

in different contexts. Since cultural, non-mutational adaptability is founded not on the alteration of one's constitution but the discovery of new solutions to the same problems, it is the identification of the constituent nature of those problems, of the needs and values previously fulfilled by different ends, to which analysis must be directed. The depletion of a certain commodity requiring a substitute necessitates the recognition of the same capacities within the earlier unit and its potential replacement. Failure to do so, whether through a system that actively rewarded the recognition of dissimilarity or which simply failed to reward and enhance the recognition of similarity, would lead to the selection of inappropriate or irrelevant substitutes.

In evolutionary terms it is therefore only the contexts that alter in adapting circumstances, not the units themselves. In fidelity multiple units are assessed for their similarity, but even the process of magnitude rewards the recognition of the same unit in the widest possible circumstances, not, as may be presumed, the recognition of dissimilarity.

Necessary Conditions Beyond Recognition

The incidence of humour, while much higher than has previously been presumed, is not equal to the incidence of pattern recognition. Returning to our book in virtual space, the recognition of the patterns described in those exact circumstances may appear to be unlikely to evoke humour. Much or all of the information could pass through the system unhindered and even if it did not it may still not evoke humour. Many of the patterns of recontextualization described exhibit insignificant magnitude to the extent that they may not normally be recognized, and the patterns of both forms may be unsurprising.

The clinical nature of illustration is misleading, however, and any of those patterns depicted with the virtual book could be found amusing even if recognized precisely as described, and it is here that the scope of the humorous faculty becomes apparent since its study is no longer confined to formal humour. Instead, the faculty applies, potentially at least, to any possible situation. Analysis of the witticisms in a novel is no more apposite to the study of humour than explaining why finally spying the corner of a book we've been looking for may lead to laughter. There are, however, necessary conditions to be met, and the nature of those conditions helps to explain why normal perception does not lead to continual amusement.

The first of six conditions states that the individual must not be adversely affected by contrary neurophysiological states. There is a tendency to ignore the status of the humorous response as an emotional reward and to overlook the fact that it and all other positive emotions will be reduced or counteracted by the neurological and psychological activity of negative emotions. Further, the fight is not a fair one, since positive emotional rewards tend to be over-ridden by negative emotions (whether caused by stress or threat or depression) of an apparently equivalent or even lesser extent. There are sound evolutionary reasons involving the *futility of dying happy*, as discussed later in this volume, for an imbalance of this nature to be exercised.

Second, the recognition of patterns must be unconscious. The entire functionality of the faculty of humour operates on an unconscious basis, allowing it to scan and assess all available bits of information without distracting the individual from conscious tasks until it is potentially valuable to do so, at the point at which information of note, significant patterns, have been recognized. The intellectual appreciation of the relationships present in those patterns and what they mean regarding their content may occur

on a conscious level elsewhere (such as when an individual consciously recontextualizes an entity), but this will not evoke humour of its own accord unless the pattern is consequently reapprehended in an unconscious fashion. While all pattern recognition is instantaneous at the moment of occurrence due to its unconscious nature, it may be delayed while the material, the stimulus, is absorbed. Thinking that occurs while a person is attempting to *get* a joke involves the deciphering of information, which subsequently facilitates unconscious recognition.

While the recognition of patterns is unconscious, the apprehension of material around those patterns is conscious, and failure to direct attention to a certain stimulus will lead to the inability to recognize patterns within it. What this means is that while the information we choose to concentrate on consciously will involve the source to which the brain initially responds, the process of analysis and comparison is undertaken unconsciously, and only becomes conscious at the point of reward. The unconscious nature of humour does not mean that (in most cases) individuals begin laughing without knowing which stimulus is responsible for their amusement, but it does mean that the process that has occurred as a result of that stimulus, the identification and analysis of the actual source of the humour, has occurred without their conscious participation. The resultant reward of humour alerts the conscious brain that the stimulus to which it was directing its attention has been recognized to contain valuable patterns, and further action may be taken if desired.

Third, the patterns that are recognized must exhibit *significance* if they are to evoke humour. Just as mild similarity might not form a clear pattern in our minds, mild recontextualization may not either. We may well still be able to recognize these similarities or differences on a conscious, analytical level, and may even consequently be surprised by them, but in such a situation humour will not exist since the necessary simultaneity and speed of recognition is absent. Of course, the assessment of what is sufficiently similar to evoke humour is entirely subjective.

The individual's experience of different matters leads to a degree of conditioning of expectations affecting the extent to which significance will be identified in the patterns apprehended. Either short- or long-term conditioning will affect the individual's judgement. If an action is repeatedly executed or interpreted in a certain way, a change to a slightly different context may be striking even though in different circumstances it may not impress at all. People are expected to look like themselves but dissimilar to others, and hence minor alterations will impress in the first and minor similarities in the second. With errors such as mispronunciation, we are highly conditioned to

expect the execution of a word in a certain way, and hence may be impressed by minor magnitudes of context. However, while humour may be evoked by minor recontextualization in such circumstances, major recontextualization will always exhibit greater strength and evoke a more intense response all other factors remaining equal. Just as fidelity is more impressive when we are conditioned not to expect it, so is magnitude.

The significance of a pattern is therefore distinct from the surprise the individual may experience at it, and the two factors do not exhibit a correlation of intensity or incidence. A pattern of minor significance (a slight similarity or minor recontextualization) may arouse surprise, whereas conversely a pattern of major significance (absolute similarity between two items) may arouse none.

The fourth condition states simply that the recognition must involve the apprehension of at least two stages in discrete recognition for a true pattern to occur, as discussed earlier in the volume. The trees in a forest will most normally be apprehended as a single environmental background rather than discrete units from which to form a pattern.

Fifth, for humour to occur the recognition of the pattern must be surprising and engaging. As already stated, there is no correlation between the significance of the pattern and the surprise engendered. If the intensity of surprise were dictated by the nature of the pattern, repetition of the same material would lead to the same responses regardless of exposure, and this is not the case.¹²

So what is it the individual is being surprised by? Objective incidence of exposure does not always bear an inverse correlation to the surprise experienced as may be presumed. Rather, surprise continues until the brain deems us to have absorbed all relevant information from the event as it occurs, even if this requires many instances of exposure. The recognition of the similarity of two entities may be instantaneous and unconscious, but the conscious and unconscious absorption of all the details highlighted by the recognition of positive repetition may take many viewings. We may consequently remain surprised by the reoccurrence of an event that has surprised us before if we are still engaged in the process of absorbing all relevant details, and this is dependent on our individual reactions and perceptions. To this extent an individual may remain surprised by the repetition of an event when others do not.

Further, there is a necessary engagement of the individual in the material before patterns may be found surprising. Unstimulating material

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A simple experiment in the *Complete Edition* confirms this.

may not even be registered by the system as worthy of further attention by the holding network. Even a novel experience will fail to surprise the individual in a significant manner if they are not engaged by the matter at hand. A rare bird may be surprising to others, and the individual may perhaps note and understand their surprise and excitement, but, if uninterested in ornithology, remain unengaged. Since the individual doesn't care about birds, the brain deems all the relevant details to have been absorbed from the information already and no surprise occurs. The combination of being surprised and engaged helps to identify only those patterns the brain considers to be of value to the individual, which, of course, changes from person to person.

Preoccupation may counteract the activity of the system in this way, preventing the individual from becoming engaged by the available information. The more directly the individual is engaged with the material, the more clearly it will be perceived and the more impactful and effective patterns recognized within it will be found (all other factors remaining equal). Certain states or tendencies, whether temporary or permanent, may also affect the intensity of the response. A full discussion of the effects of altered psychological states on apprehension is available in the *Complete Edition*. For example, while the consumption of alcohol may dull the senses, it also reduces inhibitions and increases a sense of direct interaction with the external world, potentially increasing the impact of pattern recognition. It also serves to impair the memory and consequently increases responses to repeated material.

Novelty of expression, while in no way necessary for humour to exist, may contribute to the apprehension of the pattern by facilitating discrete recognition and enhancing surprise. Laboured delivery or multiple weak patterns behind information requiring differing levels of interpretation can render recognition piecemeal and less surprising as a consequence. Note that the moment of pattern recognition itself will always be swift since it is unconscious but the nature of delivery may mean that conscious analysis is required to interpret the stimulus. More importantly, material that clearly reveals the structure of the underlying pattern will aid its apprehension and significance, and thus two different ways of expressing the same intended patterns may have very different effects on the individual. As with all other factors, surprise is a necessary but insufficient condition and consequently can not evoke humour in isolation.

The final condition of the six is a necessary coincidence of the first five. Staggered or disjointed conditions will not evoke humour.



The manner in which units and contexts are apprehended and the necessary conditions listed above are not the only factors individualizing the recognition of patterns. The subjectivity of the humorous faculty is a huge issue to approach, but it's worth here considering a few notable points before moving on.

Inevitably the individual's knowledge and experience of a subject will affect their tendency to recognize patterns or to judge them to be either significant or otherwise. Perspective on a subject actively dictates whether the individual is in a position to recognize patterns or not. To an outsider the music of a group may sound the same in every song, but to a fan who has absorbed every nuance they may appear wildly different. The individual's subjective orientation regarding information determines whether patterns are not only visible but therefore actually exist at all. This does not translate into meaning that a greater knowledge necessarily implies the ability to recognize more patterns within a subject, however. Patterns transmitted by individuals who know either a great deal more or a great deal less than us may not exist from our perspective. Associative memory also means that the individual will judge certain entities or concepts to be connected, to exhibit similarity, where others will not.

Neither does a greater incidence of pattern recognition guarantee that the source will be found more intensely amusing since the values returned determining the response are not based solely on the number of patterns recognized. Although humour may arise anywhere there are also circumstances in which it is more likely to be experienced or to be experienced more intensely, due to heightened responses and expectations. This is discussed at length in the *Complete Edition*.

As a consequence of this necessary individualization of the pattern recognition process we can not predict which patterns a person will or will not recognize within a stimulus, simply because they don't exist within them but at the point of recognition. Where we identify patterns as students we therefore do so on the basis that their recognition is common within those formats and likely to occur given the information as we see it. We therefore identify patterns as *common* to a stimulus where they are suggested directly by the information at hand or *possible* within a stimulus if they may be recognized depending on further information which may or may not be present depending upon individual circumstances. Ultimately, however, none of the patterns need be recognized at all.

Illustration

An Illustrated Discussion Based On Substance Humour

It should hopefully be becoming clear by now that we can't simply take a broad category of humour and say that all instances we define as falling within that category are based on the recognition of the same patterns. Although we can define tendencies within certain types, every instance of humour is potentially unique, as are the responses of every individual at any point of apprehension.

Substance brings together a range of humorous stimuli involving the exposure of the subject to any form of (normally liquid or semi-solid) unappealing material. We might once have called this *custard pie* humour but this evokes images of generic types, especially vintage slapstick and circus clowns, which all exist firmly within the confines of formal humour. While there are simpler or more clearly defined formats, I have chosen this category due to its familiarity and because of its varied pattern configuration and proximity to other types, which we will discuss as appropriate. Concentration on this format does not imply any comment on its quality, popularity or any other property that may be perceived to be the reason for its selection here.

What must be borne in mind during the illustration of stimuli to humour is that any, none or all of the suggested patterns may be recognized by an individual approaching similar conditions. It will appear at times as if the

pattern structure implies that numerous patterns are always necessary for the generation of humour but this is an illusion caused by our sympathy with subjectivity. By defining all those patterns that may be commonly recognized within a stimulus we are not implying that they must be recognized in combination for humour to be evoked, only that any number of them, singular or multiple, may be recognized by the individual from their perceptual point of view. The tiniest alteration in the nature of the stimulus produces significant changes in the patterns that may be recognized and in order to accommodate this breadth of recognition all those reasonably assumed are suggested here (and in the *Resources* section). In certain circumstances, however, it is perfectly conceivable for the individual to recognize four, five or even six patterns as a single compound source due to the specific nature of the material. The faster moving the stimulus the greater the likelihood that, since more instances of information are being apprehended, a larger number of patterns will be recognized. While this is a general rule it does not hold true for all comparisons between different stimuli. Sedate humour such as *punning*, for example, often relies on three patterns, whereas a swift slip-up in the street requires only one for humour to be evoked.

We will start on a small yet intricate scale. *The puzzle jar* is an ancient trick still produced in analogous forms, constituting an innocuous looking earthenware jug. When the victim asks the obvious question, "Why is it called a puzzle jar?" they are invited to pour themselves a drink but on doing so a fissure in its body leaks liquid onto them or in their vicinity. The only puzzling element of the process is how to use the jug without causing spillage and behind this titular basis of the prank are some of the sources of the perpetrator's amusement.

Any trick involves an interpretative recontextualization of the situation, whereby the perpetrator apprehends both versions as depicted in figure 65, highlighted or *refreshed* by the moment of recognition of the victim, who may also be amused for the same reason or may be accustomed to the trickster's games and identify positive repetition in their behaviour. As with all humour the question of the victim's amusement relies on freedom from the influence of *the futility of dying happy* but any humorous situation may in principle be enjoyed by the victim as much as the perpetrator, whether due to the identification of different sources or not. With the puzzle jar the perpetrator effectively produces a forced error from the victim, who is unaware of the alternative way in which to pour from the jug without spillage, leading to the potential recognition of executive recontextualization as represented in figure 65.

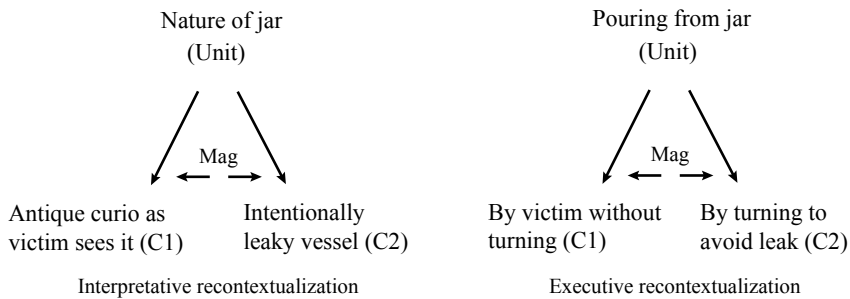


Figure 65: The puzzle jar being offered to an unsuspecting victim involves two common patterns of recontextualization before any associated effects of the leak are considered. First, the differing interpretations of the jar and second, the forced error the perpetrator leads the victim into.

Tricks such as *the puzzle jar* represent a basic form of *mischief*, itself a major category of humour. Interestingly, the presence of a perpetrating agency behind the event is not always necessary for such interpretative recontextualization to occur. If a person makes a hoax telephone call convincing a colleague they have to forego their vacation when they do not, leading to amusement at their reactions, the usual mischief explanation of interpretative recontextualization, positive repetition in the *required response* of the victim's reactions and completion of their sensations will usually hold true. However, in an analogous situation in which the same subject discovers this is genuinely the case, while there is no mischievous agency perpetrating the event, humour may still arise. In this scenario the source of amusement has shifted, and while interpretative recontextualization is still common it will now be recognized between the different implications of the news for the beleaguered colleague and the individual, who receives the news equably, perhaps even pleasurably, since they have escaped being chosen for extra duties. Completion is still common to such a scenario, as is positive repetition in the form of *come-uppance* if the individual judges the colleague to deserve the treatment they receive, but *required response* is missing since the reactions of the subject have not been engineered by a perpetrating individual.

There are therefore usually two stages to this variety of mischief humour. Inducing discomfort by adding an irritant to a victim's water supply functions in the first stage on interpretative recontextualization, during which the victim has no knowledge of what is causing their itching. Once the source has been discovered, the humour may continue due to completion

and required response in the second stage. The possibility of positive repetition to other entities or species (in this example who scratch or itch) is also present in mischief where the response alters the physical behaviour or appearance of the victim.

This *required response* is an important aspect in mischief humour as well as in bullying (such as *wet willies and wedgies*). The perpetrator attempts to bait the victim until they produce the desired reactions, forming a simple pattern of positive repetition from design to actuality. In milder, less violent forms of bullying this pattern is common. As the levels of physical violence and emotional distress increase the tendency to recognize completion also increases. At all levels, however, opposition patterns of the contrary forces of the perpetrator and the victim are readily apprehended. Further opposition based around the *unamused / amused* dichotomy expressed between the victim and the perpetrators or other observers in *you are not amused* humour is also possible depending on the nature of the individual reactions, and the format of the bullying may also lead to the recognition of *make the fat boy run* patterns.

Returning to the puzzle jar, the *required response* may be irritation, anger, deflation, loss of concentration or any other number of emotions or reactions the perpetrator may wish the victim to experience as a result of the trick. There is also an inherent opposition, not necessarily of contrary forces between the individuals as arises in bullying, but in the thwarted efforts of the victim's pouring.

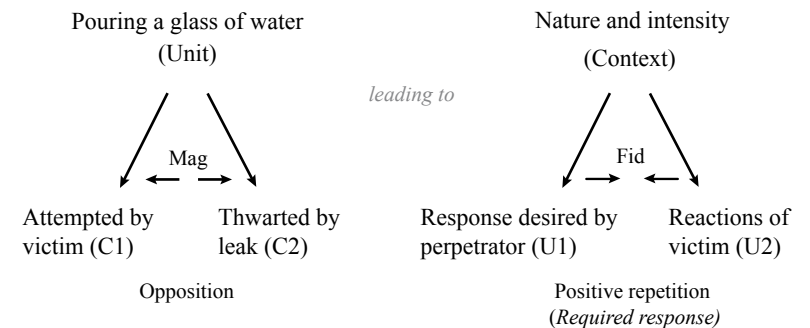


Figure 66: Whatever it is the perpetrator requires as a response, however generic or specific to the victim, its actuality in the event thereby forms a pattern of positive repetition. The opposition of the failed attempt may also be recognized by the perpetrator and (dependent on the *futility of dying happy*) the victim prior to the response.

It's worth noting at this stage that the emotional deflation or other rapidly decreased attitude of the victim may be recognized as a pattern of minification in circumstances where the response is intense, but the puzzle jar produces such a minor inconvenience that it is unlikely (although not impossible) that any such pattern would be recognized. Patterns of scale are certainly not necessary in such humour but a dominant, supercilious or over-confident person exhibiting a major reduction in any of those qualities, for example, may well lead to their recognition.

Now let's increase the inconvenience or discomfort the victim experiences because of the puzzle jar by increasing the water leakage to a more substantial spray. There is now so much of it that as a result of its contact with the victim their clothing or their facial appearance is changed, leading to the recognition of qualitative recontextualization as in figure 67.

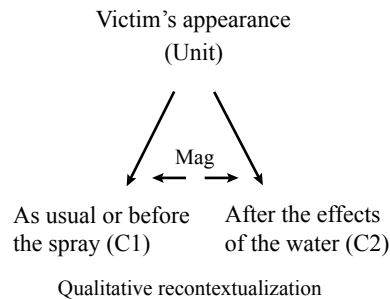


Figure 67: A basic unit and context diagram representing the recontextualization involved in spraying a subject with water.

While qualitative recontextualization may or may not be recognized depending on the degree to which the water affects the appearance of the victim, the water itself has always been locationally recontextualized. This pattern plays an important part in a large proportion of substance humour, since in most cases the humour boils down to the presence of a substance where it isn't wanted or doesn't usually occur. In the puzzle jar the amount of substance involved is possibly too small and insignificant to arouse either qualitative recontextualization or locational recontextualization (indeed it may not have made contact with the victim or have been noticeable even

if it did) but with substantial amounts involved the locational context, the material environment, becomes a consideration for pattern recognition, usually in the form of specific contexts in contrast with generic variations. Accordingly, smaller amounts of particularly undesirable substances may well have an equivalent effect to larger amounts of less repulsive material since the effect of the relocation is more significant for the victim the less desirable the substance.

Now that the volumes of substance have increased, completion of the sensations experienced by the victim becomes a strong potential pattern. Its recognition in such humour will vary greatly from individual to individual depending on the significance identified in the event and the reactions of the victim. In *repulsion* humour the completion (in combination with applicative recontextualization) is the dominant factor.

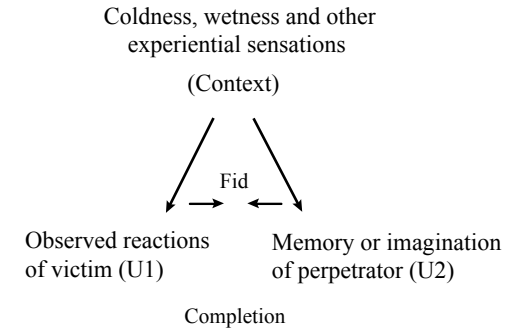


Figure 68: Completion arising from the spraying of water. The victim's observed reaction is completed with sensations of such events from the mind of the observer, who creates an entire experiential perception including physical and emotional feelings to complement the visual and audible reactions. Sensations are then recognized as existing in each, and the two are examined jointly.

While the perpetrator may feel a certain superiority due to the successful execution of the trick, the sensation of superiority is not a condition of humour. Misleading a victim with tricks such as *the puzzle jar* involves an inherent imbalance of knowledge due to the differences in interpretative accuracy, and any further recognition of scale differences between the

relative intellects or breadths of knowledge of the victim and the perpetrator (which would require significant magnitude) is first of all unnecessary and secondly only likely where such demarcations are evident and obvious rather than imagined or implied. Even where this does occur, the apprehension of the pattern is not created by the feeling of superiority, which is an emotional adjunct to the humour. Most sensations of superiority and many associated situations involving an apparent loss of dignity of the victim are therefore consequent or incidental to humour. Knowledge of the victim, however, may lead to the recognition of positive repetition if they regularly exhibit error or failure. *Schadenfreude* in itself is not a pattern and care must be taken to ensure that similar emotional or intellectual sensations are not identified as such. There are sound evolutionary reasons for laughing at the observation of error specifically unrelated to superiority or an apparent minification of the subject's dignity, as raised by the functionality of the *boundaries of magnitude*.

Scale should not be ruled out, however, but the evidence of *mischievous* tricks does not appear to provide sufficient evidence to warrant their recognition in most similar conditions since the perpetrator forces the error on the victim rather than its origination being recognized in their incompetence. If the execution of the trick forms part of an ongoing competition or feud between the two parties, dual-party balancing patterns of scale may indeed be recognized between their progress, whereby the one individual succeeds at the other's expense. If it is undertaken specifically for *revenge*, either a pattern of positive repetition or opposition in the *turning of tables* may instead be recognized. Further patterns of scale may also be recognized in any ongoing debilitation or increasing irritation caused by the effects of the mischief.

Now let's alter the interpersonal elements of the situation so that there is no perpetrator involved. Instead of *the puzzle jar* or a hose turned loose on a victim, the subject instead falls accidentally into a muddy stream. This time the locational recontextualization occurs not to the substance but to the person, who is suddenly transferred from one material environment into another. Accompanying this, while not necessary for humour to arise, may be the recognition of error in executive recontextualization, by which the individual recognizes the variety of different contexts for performing whatever activity the subject was undertaking, as illustrated earlier in the volume by the inept carrying of the child through the doorway.

Here, then, the individual appears to have displayed incompetence in their falling, and we blame them for the error. The specific details of the situation may lead to a variety of further patterns which may or may not

involve patterns of scale. Is, for example, the popular concept of looking small through error simply a metaphorical interpretation or can we translate it into the recognition of some form of pattern of minification in such situations? For the purposes of unitary and contextual definition metaphorical elements must be carefully separated from the process of analysis but in this case it is not entirely (or at least not necessarily) misleading. Beyond obvious reductions in aspects of evident emotional states the subject, by displaying ineptitude, may appear to exhibit less than an expected standard in some discipline, whether broad (such as walking) or narrow (such as snow-boarding), producing a pattern of minification from the generically expected standard perceived by the individual to the levels exhibited in the fallen individual. Composure, smugness, dignity or other qualities may also be minified but must be clearly evidenced to evoke humour. *Embarrassment* humour relies on making a person look small by the public minification of the subject's abilities or tastes, commonly with *required response*. All such patterns are perfectly legitimate but caution must be exercised in their identification since it is all too easy to presume the presence of minification wherever error occurs, and, interestingly, comparative non-error situations reveal that, refreshingly, this compound pattern is not a prerequisite of the humour associated with such stimuli.

Consider *clowning* for a moment. Clowns fall over and despite the fact that the individual may be aware that they have done so intentionally, often acrobatically, humour may still be evoked. While we may claim that clowns fool us into presuming their incompetence, other impressive feats of *I did it my way* confirm that executive recontextualization may occur with an increase rather than a decrease in the competence from the perceived norm in physical humour, whether formal or informal. While we could then make a tenuous claim that the pattern involved could be recognized as an increase in scale, it is still important to note that falling over need not therefore involve the recognition of any variety of minification, whether metaphorical or literal, of the subject's competence in order to evoke humour. However, recognition remains subjective and its identification should not be ruled out. Forms of humour such as *crap art* inform us that competence is recognized very specifically by the brain as registering various levels which may either rise or fall in patterns of scale.

Where it is unclear whether minification of competence has been recognized, without interference from metaphor we may reasonably consider the executive recontextualization we have identified in more general terms and analyse the performance of the action in a similar way to figure 46, in which the variant contexts of its execution are *successfully* and *unsuccessfully*

or even simply *badly* or *well*. No minification is required as a secondary pattern and any particular originality of accomplishment may be absorbed into the contexts of the same single recontextualization, such as *successfully with a sideways flip* or *unsuccessfully with a peculiar weakness of wrist*.

Now, instead of the person falling into the muddy stream, the subject instead drops their wallet while jumping across and it sinks to the bottom or lands in the mud. No longer is there a direct effect on them or their appearance, so the patterns have shifted their emphasis. Increasing the viscosity of the substance affects the level of qualitative recontextualization in most cases so we'll now shift the scenario to one in which the subject drops the book they are reading into a bowl of cream.

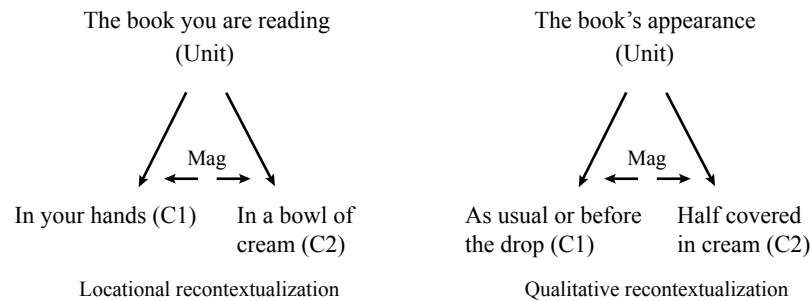


Figure 69: Patterns relating directly to the book in a scenario in which it is dropped in a bowl of cream.

The error of the subject may also be clearly identified depending on the details of the situation and the precise nature of causality, as may their incompetence in minification.

Changing once more, now the subject who fell in the stream earlier makes no mistake at all and is discovered sitting intentionally in the mud rather than relocating there by accident. There is now no fall to witness and the relocation is not observed, but locational recontextualization may still be recognized since muddy streams constitute a variant context for the generic unit *places to sit*. Further, since the subject remains clothed, the probability of recognizing executive recontextualization is high, in which the unit is *bathing*. There may, as with much substance humour, also be the recognition of qualitative recontextualization.

Now let's remove the water entirely, and watch the subject simply falling over. The only pattern necessary for this to be found amusing is in fact orientational recontextualization, although minification of competence and executive recontextualization is also possible depending on the individual's perception of causality. If the subject has a reputation for being accident prone then patterns of positive repetition are also recognizable in *trust you to do that* humour. If the individual feels the victim deserves to suffer then there is also potentially the positive repetition of *come-uppance* humour. If the fall or other physical event prevents them from achieving a certain goal then opposition may be identified in their thwarted efforts. Collision as a result of *falling over* generates a further pattern of opposition in the contrary physical forces of the movement of the entities involved.

Returning to the presence of substances, let's imagine for a moment an accidental spillage of paint. A subject opens a door and knocks a stool on which a second person is standing whose hand then travels forward spilling a pot of paint that slops forward into the room, leading to the recognition of an underlying pattern of executive recontextualization (the individual can see the person on the stool and knows how the door should be carefully opened to avoid the accident), along with predictive confirmation (the individual predicts the accident) and positive repetition of the forward force of the movement (from the door, to the stool, to the person and their hand, to the pot and the paint), leading to locational recontextualization.

Again, we may now remove the agency of the subject opening the door so that no error is involved on the part of the subject walking through it. Instead, an old shelf breaks under the weight of multiple pots and the paint falls without human interaction. Beyond any qualitative recontextualization of the person on which it falls, the activity of the inanimate objects may be seen to reflect the failure of any associated person involved (in positive repetition) or to be thwarting them intentionally (in opposition). We may now increase rather than decrease the human agency by making the spillage intentional rather than accidental. The entry of the subject through the door is identical to the first instance with the single difference that their impact on the stool is intended to lead to the spillage of paint so that now a clear pattern of opposition is recognized between the contrary forces of the multiple subjects.

Revising the scenario further, now there is no pretence of an accident and the perpetrator simply picks up the pot of paint and throws it over the second subject or pushes them into the muddy stream, throwing their wallet in after. As the different situations are considered, the level of qualitative recontextualization varies depending on the substance being applied and its

appearance-altering attributes. With the paint there is now a clear second pattern of recontextualization after qualification whereby the applicative contexts of paint are presented in various forms, such that it is reapplied from painting the wall to assaulting the victim, whether viewed specifically or generically. With the subject now covered in paint, the possibility of positive repetition to other entities arises depending on the details of the humour and the individual's perceptions. The active opposition between the two parties continues to support their activity and this assumed contrariness is occasionally reversed (especially in formal humour such as *slapstick*), whereby the victim's attempts to keep themselves free of paint or other substances suddenly cease as they begin to participate in the process themselves, producing a further pattern of opposition in the reversal of their attitude towards the event.

The use of food instead of paint leads to similar patterns, as represented in figure 70, although the applicative recontextualization of food as a form of offensive projectile may or may not be recognized as more significant than the use of paint in a similar way.

Full-scale food fights sometimes involve a secondary form of qualitative recontextualization, not of the participants but of the event, such as its recontextualization from sombre ceremony to raucous playground. It's highly unlikely that all these patterns would be recognized by an individual in any one scenario, although it should be noted that different moments, stages or aspects of the fight may lead to the recognition of different new patterns, such that multiple instances of observation over seconds or minutes may lead to the recognition of tens of different patterns rather than the same one or two repeated. We may also add, perhaps, minification of the dignity or stuffiness of participants or victims if they have previously been in evidence, opposition if the victims attempt to continue dining regardless of the disruption in the early stages of the fight, and interpretative recontextualization of the participants if their behaviour leads the individual to reassess their personalities. The rich diversity of patterns that may be recognized in simple situations accounts for the individuality of reactions to humour and facilitates amusement at the same stimulus for different reasons caused by variation in attention, perception and recognition.

Importantly, the qualitative recontextualization of a subject's appearance by a piece of food located on the face does not require the observation of the process of its relocation (or any associated social concept of humiliation) for humour to arise. Instead, two of three potential patterns of recontextualization may be identified (qualitative plus either locational or applicative) along with various forms of positive repetition

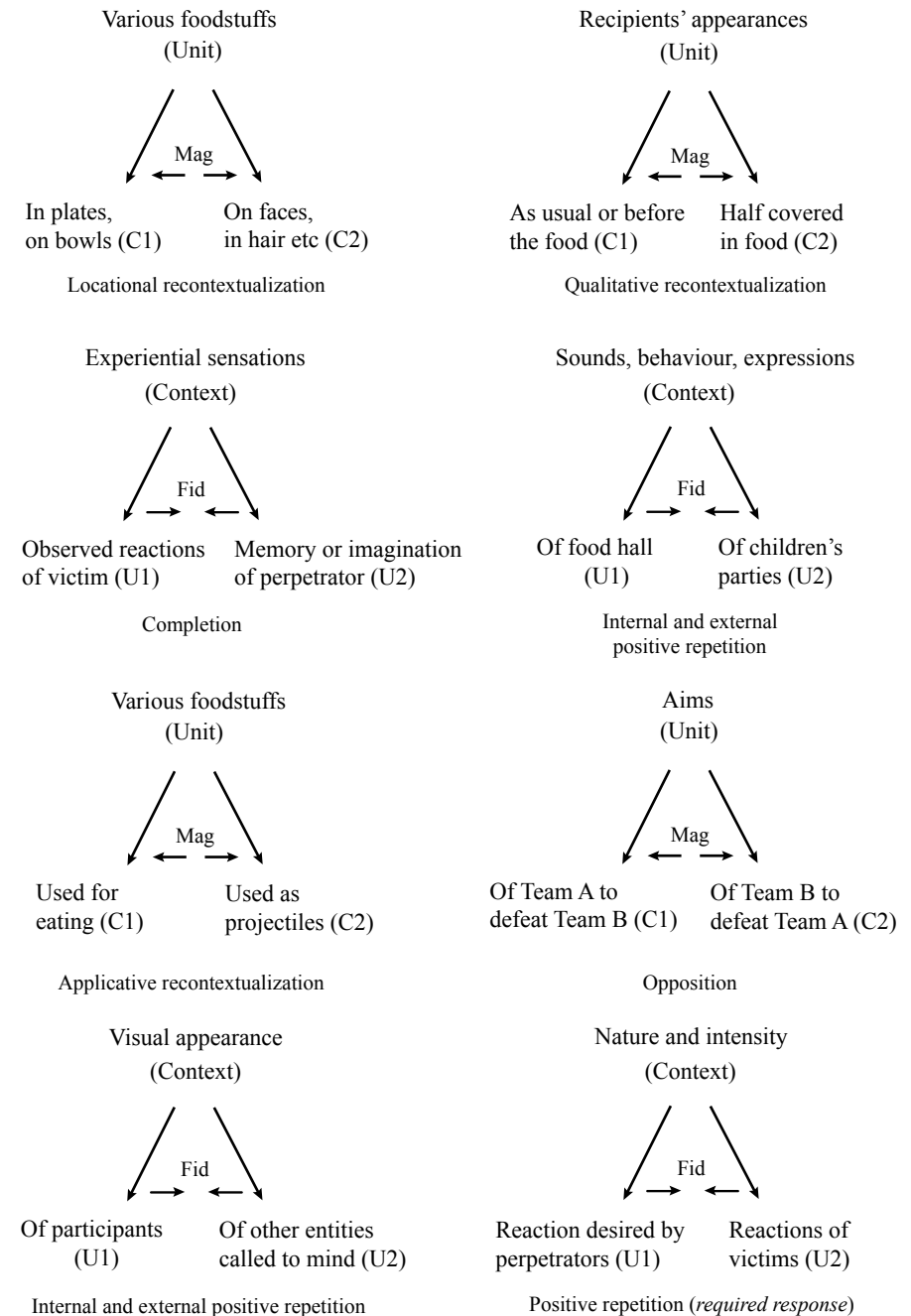


Figure 70: Some common food fight patterns.

depending on the details of the individual's relationship with the subject and the precise nature of their appearance. Qualitative recontextualization of their facial appearance may arise without engendering any similarity to an entity recalled by the mind of the individual and consequently when it does so the fidelity of the appearance is recognized as a separate pattern not accommodated by the recontextualization. Indeed, where the resemblance is significant its recognition will dominate the pattern and make qualitative recontextualization less likely.

Returning to the observation of agency, in a similar vein to the individual discovered sitting in the muddy stream, we may now observe the subject dropping food on themselves, first accidentally as they attempt to eat it and then intentionally for whatever reason they might have. In the former situation we may summarize the common patterns as locational recontextualization (of the foodstuff) and minification of competence, potentially featuring executive rather than locational recontextualization if the process of eating is that which is established as the unit rather than the food itself. The resemblance of the person accidentally dropping or dribbling food to a different species or to elderly or different specific or generic types is also common to such accidents in positive repetition. In the latter situation no minification of competence may be recognized since the food is intentionally relocated and so applicative recontextualization of the foodstuff will be dominant if it is clearly being used for a different purpose, or locational recontextualization if the food is still to be used as food but the person is using themselves as a surface from which to eat, leading to an alternative reapplication of their physical form.

Details are therefore of paramount importance in the analysis of pattern constituents. Let's conclude this discussion with a slightly more embellished example combining much of what we've looked at so far. The simple narrative scenario involves a worker attending to the grounds on the estate of an aristocratic family. As the worker toils to clear mud from a recently flooded path the owner of the estate rounds the corner on his horse and splatters them, and the area they have so far cleared, with yet more mud.

The individual's perspective affords them a clear view of the event and as the rider turns the corner they predict the forthcoming accident moments before it occurs in predictively confirmatory positive repetition. As the mud travels it is locationally recontextualized from the bridleway to the main path and the worker's face, to which the individual then looks to observe that it has been qualitatively recontextualized. The effort the worker has put in has now clearly been thwarted and a brief rolling of their eyes highlights a pattern

of opposition to the individual, possibly after first undergoing translation. Alternatively, this may instead be apprehended as a reminder (a positive repetition) of a general opposition of thwarted ambitions, of the discrepancy in status between the two subjects or of an ongoing battle between them if such evidence has previously been established by precursory events. If it has not, the event as described may lead to the recognition of a dual-party pattern of scale in their social status, clearly evidenced in different extents between the two subjects. Throughout any stage of this scenario completion may also be recognized by the individual in the experience of the worker, whether due to the splattering sensation or the emotions identified in the thwarting.

The rapid firing of pattern recognition means that the smallest addition of information or alteration in the angle of perception can lead to the recognition of new patterns. The horse and rider can not be summarized in two or even three basic patterns since any moment of apprehension provides the capacity for their recognition. Alternatively no patterns may be recognized and it is in the detail of both the individual and the stimulus that this will be determined. Should the splattering of the mud accompany a leap from the path of the horse, further patterns of locational and potentially orientational recontextualization may be recognized in the worker's movement. We have automatically assumed so far that the individual sympathizes with the worker in this scenario, which has led to the recognition of various patterns and the denial of others. The worker may have been established as a smug or irritating subject before this event, which may effect a minification of certain attributes and potentially the positive repetition of their *come-uppance*. In associated ways the various guises of positive repetition play central roles in much humour that is popularly considered to be based on nastiness.

Let's not leave it there though, since formal humour would immediately identify the capacity for further pattern recognition. Returning to their labours the worker begins to clear away the mud once more, having first wiped their face clean, but moments later the rider's companion rounds the corner and the same event occurs for a second time, with the same splattering and the same emotions, except this time the emotional response is magnified. The simple repetition of the same event is recognized as positive repetition, and the levels of emotional response are judged to have increased from the specific value registered for the first event. Further positive repetition may be identified in an assent to the worker's increasing annoyance, which the individual recognizes as similar to their own likely reactions were the event to occur to them.

This repetition of the scenario is only one potential outcome though. Alternatively (or as well) the worker could be seen to get his revenge by

later finding the aristocrat and either forcing them to complete the work or muddying them in the same way. Now instead of positive repetition the dominant pattern is opposition in the form of *turning the tables*, whereby the same relationship is reversed between the parties in which it is expressed. Also possible depending on the individual's affiliations is the recognition of positive repetition in the *come-uppance* of the aristocrat. A selection of the patterns from this scenario is represented in figure 71, with alternative conclusions depicted by the patterns annotated 1 and 2.

By altering the tiniest elements of our scenario we alter the substance of the patterns being transmitted. Minor differences in presentation will facilitate further compounds and lesser or greater fidelities and magnitudes. It is unlikely (although not impossible) that all of the patterns in figure 71 would be recognized within one situation, and even if they were it's extremely unlikely they would be recognized simultaneously as a single source, a single compound. It should also now be clear that generic explanations, while useful for discussion, can not produce categorical statements of what patterns will be recognized in which formats. While all substance humour may appear to be founded on the same principles on the surface, the patterns fuelling it are, beyond basic tendencies, dependent upon the unique instance of humour and the subjective recognition of patterns. These shifting elements reinforce the rich variety of humour's individualistic basis.

The tendency to categorize types of humour according to the genre of activity or mode of entertainment with which they are associated has deflected analysts from an accurate explanation of the humorous faculty. The structural relationships evoking humour change with the slightest alteration in presentation, disconnecting any correlation of pattern constituent to cultural theme. While the same custard pie may be thrown, an alteration in agent, angle, property or destination may render the patterns entirely dissimilar from one instance to the next.

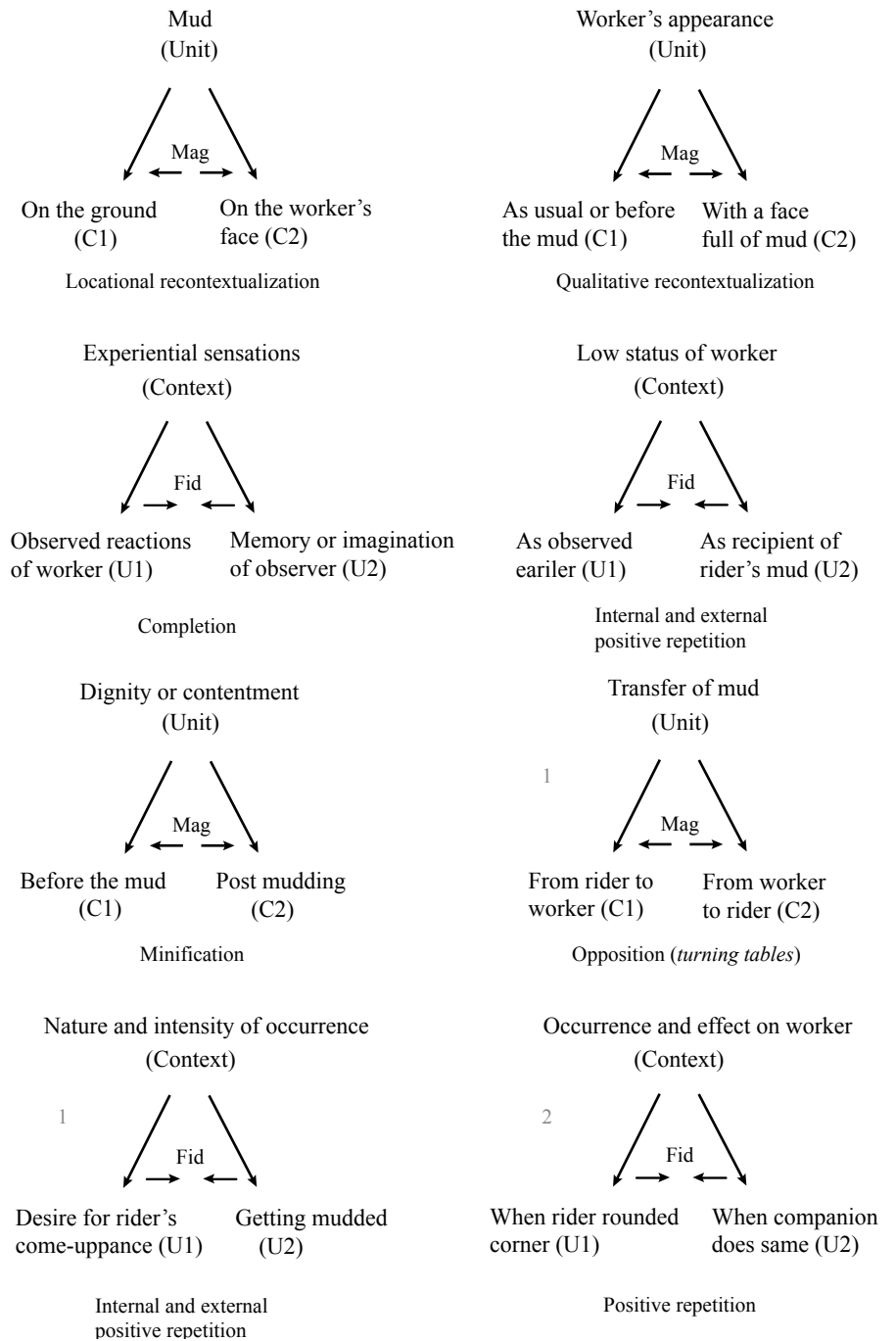


Figure 71: Selected horse and rider patterns.

Evolution

Pattern Activity As Perceptual And Analytical Accelerator

The universal applicability of the faculty of humour has led to fragmented interpretations of its evolutionary function based on situations in which it is sometimes utilized. The various applications of humour, as distinct from its mechanistic or evolutionary function, are culturally determined, and while of interest can not explain every instance of the faculty's activity. The expression of humour to particular ends in certain conditions, such as seduction or anti-dominance, tells us no more about its function than an examination of the effects and implications of listening to music does about the ability to hear.

Rather than providing a specific psychological or social function, humour is a system honed for the processing of any information. This faculty, with its intense rewards for pattern-based recognition, has encouraged a perceptual facility unparalleled in other species. The unit, context, fidelity and magnitude relationship at the centre of its networks has provided a framework in which perceptual accuracy and analytical prowess have been massively accelerated.

The basic escalation in the capacity for the recognition of unitary relationships (such as partial occlusion, reversal, inversion or division) adds definition and separation to the background environment perceived by the individual, highlighting and defining properties and entities, and making their

recognition faster and more effective. This ability is then compounded by the expansion of the basic faculty's *modus operandi* of pattern apprehension, delivering the capacity to understand representation and symbology, and from humble beginnings a complex and substantial intellect can soon be engendered.

The universal applicability of the system is its vital evolutionary strength. Since the faculty of pattern apprehension may be activated by any situation the evolutionary benefits and advantages it confers are potentially unlimited and infinitely adaptable. Unconscious and instant recognition of surprising new patterns could positively weight the chances of survival in any conceivable circumstances. The attainment of food and the evasion of predators constitute the two main prerequisites for the survival of the individual, and for the survival of the species we may add to this the achievement of reproduction. Where resources are scarce for whatever reason, the individual or species is therefore in competition with others, and the most well adapted to securing them possesses a distinct survival advantage. Beyond simply recognizing the location of a staple food faster than competitors by accelerated perception or greater efficiency in spatial manipulation (enabled by the ability to recognize the same entity in increasingly extreme circumstances), the faculty facilitates the recognition of items as foodstuff that other individuals or organisms can not, providing an immediate advantage in the competition for scarce resources by their redefinition, circumventing the pitfalls of declining stocks. The capacity for the analysis of environmental patterns by extrapolation of trends is only possible through advanced pattern manipulation and, since it facilitates prediction and preparation through forewarning, provides a potentially vital tool in the competition between or within species.

The faculty is not restricted to apprehension. With the benefits of comparative recognition intellectually absorbed, the precise manipulation of units is next encouraged by the faculty's activity. While appearing separate, these two processes constitute one simple facility that runs on the most basic of hardware, a facility that has provided the species with an enhanced system for the comparison of multiple units for the same purpose and the assessment of a single unit's appropriateness for multiple purposes. Put simply, this equates to optimizing the individual's manipulation of the world by selecting the best tools for the widest possible range of jobs. The comparative context of fidelity enables comparison in any situation, providing survival advantages associated with the identification of common properties in different entities, while the range of contexts in magnitude encourages the recognition of increasingly accurate means of manipulation and a wider range of uses for

the individual's tools, enabling the performance of an ever increasing range of tasks.

The faculty is therefore founded fundamentally on encouraging the individual's ability to draw multiple units together in fidelity and then to push the contexts of a single selected unit further apart in magnitude. It is not, therefore, the recognition of anomaly or incongruity or any other form of aberration that is being rewarded, but the recognition of the widest possible range of contexts to which we can put the unit at our disposal once we have located it; a positive, adaptive and creative system founded on utility and invention.

Since the faculty is unconscious it can scan all information, alerting the individual to patterns that may be of use through the reward system. The conscious mind may or may not then use the information with which it has been supplied in this way. Elsewhere, when specific problems are addressed, the same processes developed by the faculty, of comparison, of unitary interaction, of manipulation, are applied to a chosen end, where the nature of the information that is desired has been predetermined. While the processes are the same, such conscious analysis is not undertaken by the humorous faculty. Humour is a catch-all system running unsupervised and returning values wherever it considers them of interest, yet it can not be turned towards the solving of a particular problem. This must be done consciously, using the perceptual capacities that humour has developed during the evolution of humankind.

There is a necessary individualization of the pattern recognition process that has encouraged its contribution to human adaptation. Since no content is dictated by the system, enabling its application to any perception and making it endlessly adaptable, the necessarily subjective nature of perspective must be accommodated. Individual challenges may be met with individual solutions, rather than an inflexible reaction to the same general problems faced by the entire species. To that extent it is the individual's survival that is enhanced by the system and the faculty may be applied against a fellow human being as easily as against a common threat. Such intra-species competition confers macro advantages on the species and strengthens it against common foes.

A Narrative Discussion Of Specific Advantages

The specific advantages of pattern activity are worthy of clarification by illustration. Let us return to the hominid we originally met in the first volume. He has no vocalized name since we have decided he and his familiars are pre-linguistic, but language is on the horizon. His community has survived well on their wits but they have now mined and worked the last accessible flint they have been able to locate, and its shortage threatens to affect their ability to hunt and defend themselves.¹³

While adopting a short cut back to the camp one day the hominid slips and takes a tumble down a rocky hillside. As he does so, something catches his attention. He may at first have noticed a visual similarity, or maybe a tactile one, but the comparison of this new material to the flint of which they are growing short is instantly apparent regarding at least one of its properties, despite its bright colour and peculiar smell. Much earlier in human evolution than ourselves, the hominid receives a reward, an injection of the humorous response, for his sudden discovery. On examining it further, the new material is seen to be brittle and easy to work like flint and also strong when sharpened and light for transportation. By a heightened perception of comparatives our hominid has drawn multiple entities together through the context of connecting properties (such as appearance and texture) in positive repetition, facilitating the substitution of one unit for another regarding the performance of certain tasks.

For the purposes of this illustration we will call this new material *newmat*. It is clearly here the recognition of similarity, evidenced by the persistence of the comparative context through multiple units, that enables the hominid to identify a new solution to a change in environment, to the loss of a commodity, not the identification of, or adaptation towards, dissimilarity. While the circumstances have changed around him he has recognized properties in surprising new locations, and realized the value of their continuity.

¹³ This narrative appears for illustrative purposes only and combines different stages of evolutionary development within a few hours. The hominids involved are therefore almost certainly anachronistic amalgamations of the inhabitants of different eras, and quite possibly constitute different species at different points of the next few pages. In order to illustrate the benefits of specific patterns the hominids have been endowed with certain advanced abilities yet others remain absent. More realistically, this narrative might have included chapters spanning hundreds of thousands of years, as depicted more convincingly in *Humour*, analysed more closely in the *Complete Edition* and addressed directly in *The Theory Of Representative Economy*.

On returning to the camp a female catches his attention silently by pointing to the bushes. Despite standing at an obverse angle from her line of sight he is able to calculate and follow the direction of her outstretched arm due to his capacity with orientational recontextualization, and consequently identifies the source of her concern. Motionless, soundless, the smallest corner of a texture can be spied beneath the foliage. It is the hide worn by a rival community, an adverse tribe competing for limited resources in the worsening climatic conditions. A swift rock towards the head sends the competitor running and two of the other males give chase.

Now he shows her the *newmat* he has discovered and acts out via gesticulation the process of finding it, passing her a lump for examination. Next, as she suckles her young the male sets about the process of multi-component construction, first working the material into approximate blades. In front of him he has sticks of wood, blades of grass and ready-worked *newmat*, each chosen for their desired properties of straightness, toughness or similarity to flint, through the fidelity of positive repetition. He has ten of each, and slowly but deftly assembles each into a spear. This is his job, his responsibility for the group, and his alignment and precision are unsurpassed in the rest of the community. Each spear he constructs from the internal image he maintains in his mind, completing a simple pattern of division between the elements spread out before him and the blueprint to which they should be worked, allowing just the right amount of *newmat* both before and beyond the end of the wood. Taking an older spear that has blunted, he reverses the construction process and unwinds the grass to separate the elements in simple opposition, laying out the grass and wood for future use and disposing of the crumbled blade.

As he works it starts to rain and he notices that unworked blunt edges of *newmat* leave smudges on wooden surfaces when wetted. This recognition of the material's qualitative recontextualization thereby enables the reapplication of the material to a new end: that of simple marking of the environment whether for territorial or communicative purposes. The same unit is now apprehended in variant contexts and its abundant supply means that two functions can be performed by the same material for the foreseeable future.

By applying *newmat* to surfaces with varying degrees of pressure the magnitude of executive contexts for its use as a marker are tested and discovered, and those that pass the *boundaries of magnitude*, whereby the material breaks and is no longer usable, reveal the presence of error. By locating the breaking point it becomes clear how far the material can be pushed, achieving its most effective form of application and execution.

Suddenly the female tries to get his attention. While he has been working with the spears she has heated the *newmat* he presented to her and it has changed its constitution. He sees it and understands her play-acting signals (despite their not being instinctively hard-wired), and by doing so effects dual patterns of translation, of the material alteration in *newmat* and by the interpretation of her representative communication.

He also recognizes a further pattern, however, since this was not what he had intended her to do at all. Observing her error he laughs at the recognition of interpretative recontextualization by which the boundaries of magnitude are temporarily relaxed. *Newmat* may be many things, but it is certainly not a foodstuff. He holds up the spear and after a brief moment's confusion, she laughs too.

Later, having discovered both applications for the new material by dint of unconscious pattern recognition and by doing so realizing that units may possess multiple contexts, the hominid actively searches for new uses for the material through conscious intellect, attempting a variety of applications not yet perceived. By doing so he pushes its contextual environment further from its origin until, if he is both perceptive and fortunate enough, it is recognized to fit appropriately once more, and the unit is utilized elsewhere.

The tale of *newmat* is a simple one. By using the adaptability encouraged by the humorous faculty our hominid first drew multiple units together for comparison within the same context, locating properties in unexpected places, before focussing on a single unit and pushing the contexts apart to which it was applied in order to put the same singular entity to multiple uses.

An economical system of immense intellectual scope, from the basic scanning of all information for similarity a complex comprehension of units and contexts is developed, in turn encouraging a facility with application and manipulation. The role of surprise in the equation means that novel and previously unabsorbed patterns are more attractive than those from which all information has been extracted. The reward system directs the individual back to the stimulus in search of further information until it is deemed of no further interest, and each visit will potentially lead to further absorption until the patterns are no longer surprising and all available information has been processed. Whether that information is then acted upon, however, is a different matter.

Let's rewind the narrative for a moment. As things stand the evolving hominid receives a reward for his discovery but let's now exclude this due to contrary neurophysiological pressures. On discovering *newmat* the hominid is threatened by a predator and instead of experiencing a

rewarding high, freezes in silence, with neither laughter nor elation. There are sound evolutionary reasons for the circumvention of the response in such threatening conditions. While humour itself is a cognitive faculty, the humorous response is a positive emotion like any other, and contrary emotions will tend to over-ride it since attention to danger is more important on a survival basis than the enjoyment of happiness. Consequently any emotion based on deleterious circumstances will remain dominant because of the basic necessity of survival and the avoidance of danger in the short term, and on a longer-term basis the suppression of the response also helps to prevent the receipt of positive rewards becoming associated with personally harmful circumstances. The presence of such contrary emotions is entirely dependent on the individual's reactions, however, and not the innate nature of the circumstances apprehended, and it is not possible to predict when or if the response will be over-ridden in this way. The persistent notion that humour must be playful or harmless due to a desire to treat this response differently from all others is misleading and has stalled its correct analysis. The reason humour is sometimes denied or suppressed by stress or threat or other negative circumstances is founded not in the nature of its activity but in basic principles of survival, as simply illustrated here. Dying happy, as it turns out, is of no evolutionary benefit.

The question of whether rewards are experienced throughout the rest of the narrative raises the question of how evolved we presume the faculty to have become at the time of the hominid's existence. Would he have received a humorous reward (with or without the external signal of laughter) for the recognition of the finger pointing or the spear building? The debate is too long for this brief discussion but either way the faculty that has enabled him to make the comparisons necessary for such assessments and sudden insights has evolved due to the cognitive structures and internal neurophysiological rewards associated with humour. Whether or not it is still active at this stage in evolution for instances of pattern recognition which, in modern humans, would most often no longer evoke humour due to the mundanity (and therefore lack of novelty) of their occurrence, however, is a different matter. The individual circumstances of his responsibilities for the group also reduce the likelihood of his experiencing a response for the construction of the spears, although other hominids at the same stage of evolution may perhaps do so if instructed in the art. In the *Complete Edition* we will consider the scenario in which our solitary hominid returns to the camp on the day of his accident to explain his discovery and his companions, in their pre-linguistic state, provide their assent to his new information in the form of laughter, and confirm by doing so that they have understood and

recognized the value of the patterns he has presented to them.

One thing is for certain: when our hominid next espies *newmat* in the hillside he does not experience the same intensity of reward as the first time he did so. The faculty of humour initially highlighted the relationships between different units and he consequently took conscious notice. Several times as he returned to the material he experienced the rewards of humour in decreasing intensity but as his intellectual knowledge of the similarities became complete the faculty had no further reason to reward him for addressing their details.

Now let's rewind for a second time. A different hominid, in a different situation, does not slip and discover *newmat*. In an alternative, later narrative he instead designs a different way of accessing the flint in executive recontextualization, allowing them to mine that which is out of reach, and their resources continue amply until new technology arrives. In terms of survival the ability to persist for even just a few months longer in harsh conditions could make the difference between the success and failure of a community, and, ultimately therefore, the species.

The Evolution Of The System

The origin of all patterns as apprehensible forms is possibly located in visual perception, as might be intuitively presumed since patterns are now thought of in this way. In this initial form they reflect the perception of external states, of activity effected by other agents, and consequently the pre-eminence of apprehension and analysis over application and manipulation. Some of this perception is general to all visual apprehension (such as magnification), while other forms are more specialized (such as the translation of non-hard-wired interpretations of facial expressions and gesticulations) and as a consequence will have evolved at different times. While this is true, the basic capacity to recognize novel repetition exists in each, regardless of the sophistication of its application.

While the chronological order of the evolution of the patterns must be based to some extent on conjecture, it makes reasonable sense to assume that the network assessing fidelity preceded the evolution of the apprehension of magnitude. A simple process of unitary similarity would provide distinct survival advantages without the need for a comprehension of contextual background. Later the network could have been supplemented by the network assessing magnitude once human intellect had developed to the point where the comprehension of contexts became an important factor in the manipulation of the environment. Indeed, it would be difficult for magnitude to exist without the capacity for fidelity as a foundation. On this basis positive repetition, the enhanced comprehension of simple similarity, would almost certainly have evolved before all other patterns. Completion and translation enhanced the ability to imagine and understand the emotions, intentions and silent communications of others, whereas the origins of division lie most probably in the recognition of broken natural entities, leading to an identification of their components, facilitating a basic reversal of the process as construction.

The patterns of magnitude first existed as perceptions of external states as well, before becoming active tools for manipulation. The alteration of an environment leads to the recognition of new contexts through which to apply units, whether that alteration is first effected by the processes of nature or simple observation due to relocation or reorientation. Such recognition alerted hominids to the potential width of contexts and breadth of comparisons, suggesting they might themselves effect reenactment of those widths with different materials in different circumstances, turning what had been learnt in apprehension into application. The basic pattern of application would

therefore have preceded the remaining patterns of magnitude. The recognition of scale, however, is vital in the perception and judgement of distance and may have found early application in the faculty's activity. A comprehension of scale is required by many animals, of course, and is performed to varying levels of competence by different species. Humans are particularly adept at it, yet it is their ability to perform the same processes in relation to properties rather than entities that eclipses perceptual capacities in the remainder of the animal kingdom. The accelerated recognition of patterns of scale in the physical world has progressed to function in abstract analysis involving the recognition of contrasting variables over time. Opposition may have evolved first from simple observation of reflections in water, later developing to a comprehension of the reversal of procedures and activities perhaps regarding rebuilding and repairing. Qualification, enhancing the recognition of identity and refining the execution of activity to increasingly precise forms, may have been one of the last of the patterns to become active. Once the assessment of contexts was in place, the evolution of the range of patterns reflects simply the activities being undertaken by human beings at the time, and does not require any fundamental alteration in the hardware of the faculty, merely its expansion and common application to new concerns.

As the faculty increased the speed and capacity of pattern recognition in novel circumstances it also, inevitably, increased the intellectual capacity for the recognition of unsurprising patterns unrelated to humour. Unsurprising similarity will not evoke humour in an intellectual solution, yet it will have been enabled, hastened and honed by pattern recognition's contribution to cognitive analysis.

It is possible to summarize the survival advantages and expansion of the basic faculty thus:

Those individuals who recognized new patterns possessed a survival advantage in the location of resources, the evasion of predators and the achievement of reproduction through increased adaptability conferred by enhanced unitary recognition.

Those individuals who experienced pleasure at the recognition of novel patterns would seek information to which to apply the faculty. By doing so they would apply it more frequently and would consequently be at an increased advantage to other individuals not doing so, ensuring the proliferation of pattern recognition and its association with a motivating reward system.

Those individuals who devoted increased cognitive capacity to the faculty could accommodate increased pattern recognition activity, benefiting their survival chances further and ensuring the expansion of the faculty.

The basic pressure of the underlying benefits of the system (the ability to identify the best possible unit and then use it in the best possible way) ensured that increasingly extreme fidelity and magnitude were rewarded, reducing the tendency for patterns of lesser significance to evoke a response.

In turn, the necessary applicability of the units under analysis led to the inevitable imposition of the boundaries of magnitude, exerting the greatest influence on interpretations and applications, since it is in these that the mind is directly searching for appropriate uses for entities, and uses must be valid or the effort of their identification is of no benefit, despite the width of magnitude, and no humour will result. A system for analysis is only of value if the units of information with which it deals are viable, and hence the equivalent strictures in fidelity. It is of no applicable use to identify units in which the comparative context is located if those units are not viable or real. It could, in fact, prove damaging. It is consequently likely that these boundaries existed initially without being crossed, and it was only later in evolution, once information became more varied and voluminous, that they started to become relaxed in certain circumstances. Once those units have been released from the restraints of viability, as discussed earlier and illustrated in the hominid's narrative, the lessons of failure became almost as valuable as those of success in the recognition of *error*.

In humour, patterns and the cognitive processes associated with them have become more important than the content projected onto them and affect human emotions more intensely and more frequently on a daily basis than any other stimulus. While most instances of pattern recognition now confer no direct survival advantage, the remarkable intellectual capacities engendered by the faculty contribute to countless aspects of the continuing adaptability and success of the species.

Echoes Of Intellect

Adaptability is a potentially complex process and encouraging it mechanistically seems impossible, yet the basic functionality of the humorous faculty, the contentless recognition of novel repetition, provides an unconscious process ensuring the individual is rewarded for just that.

Humour's primary functions of analysis and adaptability are not the only benefits of pattern-based systems founded on surprise repetition recognition. Representational comprehension, vital for the apprehension of language, art and other symbology, can not exist without an advanced facility with pattern recognition. The process of repetition recognition also enables the development of generalization and hierarchization skills, of significant importance in the storage and retrieval of information and consequently all intellectual activity. The ability to recognize and differentiate between the generic and the specific, encouraged at the most basic level by the processing of information in humour, further enhances this same ability.

Having encouraged the comprehension of representation, the patterns available to the faculty also reflect the range of actions that can be effected on a unit, providing a complete set of tools for syntactical and arithmetical functionality. In fidelity we find everything we need for a basic mathematical system, and in magnitude, in the matter of contexts and of one thing acting upon another in a certain way, we have all the parts of speech we require for complex communication. Through pattern recognition all things, all actions, all external events, can be reproduced in the mind in complex abstract states.

How then, if patterns are so important to human cognition, perhaps even fundamental to its success, can other animals think or perceive at all? How do chimpanzees or octopuses solve problems if they have no sense of humour? Stating that the faculty is a fundamental cognitive process that functions on a basic level of pattern recognition does not mean that no other species can or could recognize patterns or solve problems without it. While humour has accelerated and intensified this ability it is not a prerequisite for an analogous intellectual capacity in another species.

It is therefore in the organization and analysis of information during the scanning process that humans differ from other animals, not in the basic cranial architecture via which normal cognition occurs. The eight patterns existed originally because they were basic forms of perception, necessary for the conscious absorption of information. They exist therefore because they are reflections of the external world, of actions that are necessary to calculate

its progress and then manipulate it. When accelerated, as in human beings, they form the basis of systems that we then use to do exactly the same thing on a much more advanced, representational level. Our mathematical and syntactical systems are macro-echoes of basic perceptual functions present in all conscious organisms.

Patterns are simple cognitive echoes but in humans they have been accelerated beyond comparison, enabling the apprehension of abstract properties and complex representation. Accelerated by the activity of enhanced pattern recognition, thinking is itself the ultimate representation, the finest of echoes by which to manipulate the world.

Conclusion

The Nature Of Unified Causality

It's worth considering for a moment the nature of this unified causality we have identified in all laughter, and here, correctly, we do mean laughter. Through *pattern recognition theory* laughter has been reconnected to its cause, which is exclusively *humour*, but a humour unknown to previous theories. That there is no difference in causality between the responses evoked during social interaction, at the recognition of a coincidence, when a baby chuckles at an infantile game, when an observer tries not to laugh when a person falls over, or in any instance of formal humour, whether situation comedy, circus clown or linguistic duality, is unsurprising yet refreshing in its implications.

This is a major revision from all previous theories. All types of stimuli, whether informal or formal, all instances previously overlooked as humour and all those explained by prior theories are now united by a single cause, the simple activity of the same information-processing system. The global nature of *pattern recognition theory* is best communicated via its application, and the following *Resources* section begins the substantial process of demonstrating this unity. There are huge numbers of informal stimuli now awaiting examination, and it is important for many reasons psychological, sociological and neurological that they are comprehensively documented.

An understanding of this unity opens up significant areas of research regarding the basic processes by which the brain handles information. In time, it will be seen that the faculty of humour is fundamental to the

intellectual capacities of the species from the most basic level upwards and that it is always active, always searching out new connections. Humour, as the faculty of pattern recognition, therefore becomes the single most important component in the intellectual success of the species.

The nature of unified causality also means it is necessary to redefine the way humour is examined, both on a cultural basis and in academia. *Pattern recognition theory* represents a true unification, not just of sources of laughter but of prior theories also. While apparently denying all previous theories it also unites them in a new form, identifying the foundations for each. Anomaly theories have generally identified humour based on qualitative or applicative recontextualization, while mock-aggression theories have tended to recognize opposition and interpretative recontextualization. Bergsonian roboticism was founded on the identification of positive repetition and applicative recontextualization, and broader incongruity theories on the recognition of patterns of scale or locational recontextualization, often alongside those identified in anomaly. Superiority and anti-dominance theories have tended to recognize positive repetition and patterns of scale, and even the popular theory that *it's funny because it's true* exists because of the simple recognition of positive repetition.

But how will we ever prove this unified causality? Beyond argument and example there are other processes, but they must be treated with caution. Since the mechanism, we claim, is the same in all instances, we might presume that MRI scans of instances of the occurrence of laughter should consequently exhibit no significant dissimilarity whether caused by formal or informal humour, but there are various factors that might render achieving a single universal response for all humour impossible. Beyond the difficulties associated with gaining accurate, genuine results for the latter, there are various complications and obfuscations to MRI comparisons that require a degree of circumspection.

While MRI research on humorous stimuli has occurred already, new studies are required with more detailed knowledge of the mechanism of humour and a greater sensitivity to the faculty's range. It will initially be necessary to separate the processes of fidelity and magnitude, before subdividing attempted stimulation into different individual patterns. Does the same part of the brain that assesses fidelity assess magnitude? Does either assessment occur in the same part of the brain that scans the units initially? Are individual units scanned for multiple contexts by the same area that scans multiple units? Are the eight patterns recognized differently, involving various areas of the brain beyond those of the basic perceptual media? Does the recognition of patterns as defined by this theory relate to the recognition

of unsurprising patterns visually or elsewhere, or does the faculty of humour operate separately from any such centre of perception?

Even once we have identified our neural correlates for the faculty, there are compounding factors that make it unlikely in practice that all results will exhibit identical images. First, and not insignificantly, we should expect a proportion of informal responses to exhibit differences due to the influence of artificiality during social interaction effecting the outward signal of laughter without the activity of the inner mechanism¹⁴, along with whatever processes are necessary for duplicity of communication or the mimicry of another's emotions and responses.

Much that occurs during social interaction specifically (as opposed to other forms of informal humour) revolves around complicity and support. Similarity of perspective or agreement on an issue is reflected in the recognition of positive repetition where the units possessed by each individual are compared and matched and then become associated. This recognition is then broadcast in the form of laughter between the parties as acknowledgement of similarity. Such events are so common, and the process will have played such an important role in the communication and collaboration of survival efforts (between strangers, between familiars in the hunt, when defending themselves, when communicating new solutions or ideas), it is possible the system has developed a truncated form communicating the desire to express complicity leading directly to an outward signal without the full activity of the mechanism.

While the observer receives the confirmation they desire, such communication is still essentially artificial, although it is likely to exhibit different MRI results from calculated artificiality since the intention to communicate complicity in an artificial manner is unconscious. Many instances of the broadcast signal at lower levels during social interaction may, on MRI examination, be found to exhibit such characteristics. However, whether artificial stimulation of the system is involved or otherwise, both the mechanistic causality and the function of the laughter occurring remain the same. The desire to communicate the recognition of positive repetition invokes the appropriate broadcast response, whether the individual has taken simultaneous pleasure in the recognition or not.

The application of humour to a certain end changes neither its function nor its mechanism, although it may cause minor alterations to its MRI.

14 The role of artificiality in laughter and the tendency of individuals to employ it as a confirmatory response reflecting positive repetition, even when they have failed to understand the communication by which it is stimulated, and the subjective psychology of such responses, is addressed in the *Complete Edition*.

Any social application to which humour is put (such as garnering social support for opinions) will lead to the existence of ulterior processes in the brain compounding the MRI and care will have to be taken to extricate the faculty of humour from the effects of its social context. Studies of responses caused by formal humour may also cause problems during analysis due to the possibility that the individual's knowledge that they are about to be presented with a stimulus intended to amuse may produce specific reactions unconnected with the activity of pattern recognition, distinguishing them misleadingly from responses during informal comparatives. Studies to date have concentrated exclusively on formal humour, providing stimuli that will be readily and instantaneously recognized by the subject as entertainment or leisure activities. Informal humour permits no such luxury, and responses evoked by non-leisure events may evoke some level of dissimilarity as a consequence incidental to the activity of the mechanism.

Further, the extenuation or attenuation of responses during social interaction must necessarily involve the activity of voluntary and involuntary networks which must also be extricated from the analysis of causality. Such controls are much less likely to occur outside social interaction, and will necessarily compound the MRI. We have, of course, hereby become embroiled in the world of social dynamics, but we do so only to emphasize the unified causality of laughter, regardless of the associated activity that may or may not be present during social interaction.

While it may take some years for MRI research to reveal the full range of neural correlates of the humorous faculty, field research continues to reinforce the global nature of pattern recognition and knowledge of unified causality has led to some interesting observations. A substantial study carried out on the causality of laughter¹⁵ revealed that many low level broadcast responses were observed where patterns of positive repetition were apparent. The vast majority were discounted from the study since they were effectively unrecognizable as laughter. Snorts, grunts, and sudden exhalations are all clearly employed as minor communicative signals of complicity and concurrence, and reflect the importance of confirmatory responses during social interaction, but it was not possible to categorize such responses as part of the humorous process. However, low level responses clearly do exist in situations unconnected with social interaction also, where the intensity may be mild with little or no outward broadcast signal. It is possible, although difficult to ascertain, that many of these low level signals are being employed on the same spectrum, and therefore for the same reason,

as standard laughter responses. What this means is that laughter becomes simply the most extreme of the responses available, more likely to occur in certain circumstances than others due to the degree of communication required and the intensity of the response evoked. Elsewhere on the scale responses range from the barely noticeable internally to the mildly apparent externally, each graduated towards the reward for more significant pattern recognition.

Setting the analysis of laughter during interpersonal exchanges on the same footing as that stimulated by recognized comedy is a great liberator, and informs us of much that has been overlooked regarding social activity. The concentration on laughter as the basis of many previous studies has therefore been misleading. To begin to redress the imbalance there is a need to examine the rewards that occur for pattern recognition on a minor, frequent basis throughout the day, and we will require much more sensitive equipment to monitor and interpret its activity to gain a true reflection of the faculty's importance.

Why, then, has the divide between formal and informal humour, between comedy and normal perception, appeared so convincing in the past? Why, if everyday life leads to humorous amusement, do we require comedy as an entertainment at all? The split between the two sides is another illusory aspect of the faculty. Much comedy arouses only mild responses, and everyday occurrences, in or out of social interaction, may produce hilarity. But during entertainment we are at rest, unconcerned by factors compounding our perceptions and responses and the stimulus may consequently be unpolluted by difficult or irksome associations. Since it has to compete for our attention, comedy also seeks to evoke the clearest, most significant and general patterns with the greatest rewards, and to repeat them quickly and often in a manner that is less likely in unstaged, unscripted and unrehearsed perceptions. Without the tailoring of the event, in everyday life patterns are often less significant or more specific to the individual. In social interaction, though, people come together once more to swop, compare and transmit as clearly and universally as possible and as a result response levels may exceed those produced at many types of formal humour. The need to communicate their recognition in terms of a clear broadcast signal is also increased by such interpersonal activity.

That all sources of the response have the same causality makes logical, social and psychological sense also. The question of two forms of faculty co-existing, one for social interaction and one for comedy has caused endless problems with analysis, not to mention logical and cognitive inconsistencies. How would the brain know where to draw the line, and what if I decided to

entertain you with a one-liner in the middle of our social interaction? Further, since the laughter produced is the same in all cases, how do you know which faculty I'm employing and what it is that I mean to communicate by its use?

Unified causality provides us with the description of a faculty for analysis in many more situations than was previously presumed, and establishes the precise nature of that causality across the entire range of possible stimuli.

End-piece

Stepping back for a moment, the claims we have made regarding the scope of the faculty and its role as the basis of human intellect are substantial and remarkable, perhaps even incredible to some.

But however forcefully we assert the tenets of the theory, isn't this all just intellectual game-playing? Between the eight patterns the system provides an infinitely versatile control console, and there, ironically, lies the rub. If we can apply the eight patterns to any situation, if we can say that all events fall within their remit, haven't we simply fabricated an observational system for the description of all activity, humorous or otherwise? If every perceived event can be apprehended as a pattern yet not always lead to humour, doesn't the theory tell us nothing about the causality of evocation, and aren't we back to square one? This is, fortunately, most certainly not the case, but the suggestion is sufficiently important to merit a brief riposte.

Just because we can describe any event in terms of the eight patterns does not mean that humans unconsciously recognize patterns in everything that occurs. Unless the unit of information is sufficiently novel or worthy of further attention it won't be compared for similarity at all, and unless it is then successfully compared with another of significance none of the patterns will be recognized, despite the capacity for us to identify unit and context relationships intellectually if we so wish in any material we care to examine.

Rather than stating that all events can be described by patterns (which is a misleading interpretation) it is more accurate to explain that significant patterns will be identified behind any humorous event. While the scanning process is unconscious, the apprehension of the material to be scanned is not, and the attention to factors in which potential repetition may be recognized is entirely subjective. Since events can only form patterns if they combine in discrete recognition with a previous or concurrent event, if the individual does not remember, notice or compare them together humour can not exist. The simple necessity of two discrete stages of perception prevents most events from forming patterns. While an event may remind one individual of an earlier experience, another may consider it entirely novel. Equivalently, the potentially amusing alteration of a person's appearance will remain subjectively unamusing if the two contexts are not compared and identified as exhibiting variation. While we may attempt to assert that patterns exist in either of these or any other scenario on an objective basis, they do not, and only occur on subjective recognition by the individual.

As analysts, however, the application of *pattern recognition theory* to humorous events reveals the clear recognition of significant patterns during all instances. It should come as no surprise to us that the faculty performing that recognition underpins human intellect. The rewards associated with it are remarkable in their frequency and intensity, so much so that a lesser role would render them completely disproportionate.

Pattern *recognition* is in many ways pattern *cognition*, since the promotion of patterns through the reward systems associated with humour has massively accelerated humankind's ability to order and manipulate multiple units for multiple uses. Put like that, there are few better ways to express human ingenuity and adaptability.

Resources

Analysis and Definitions Of Stimuli To Humour And Associated Pattern Constituents

The intention of this section is to provide a brief analysis of a wide range of perceptions commonly evoking humour. I have chosen those presented here either due to their frequency in popular culture or because of their overlooked importance in the everyday activity of the faculty. Since humour can arise from any information the list could theoretically become limitless, and it has therefore been necessary to impose certain restrictions by concentrating on experiences most likely to occur regardless of the confines of specific cultures, although this is, of course, an imprecise assessment.

The informal nature of many of these stimuli means popular concepts from comedy appear alongside everyday occurrences not popularly recognized as formats of entertainment. Further, few established genres of either comedy or humour equate to types of humour as defined by the identification of their constituent patterns and hence it has been necessary to originate and define various categories for ease of reference. Where traditional formats have been used for analysis or example they too are included and defined here.

It can not be sufficiently emphasized that nothing is inherently amusing. Where a stimulus to humour is identified and explained, such as *irony* or *mimicry* or *unexpected reunion*, it does not mean that all occurrences of the type will evoke humour. When they do, however, the patterns described here

are the most commonly recognized in each format, although every instance is unique, and the recognition of patterns remains a subjective process. Importantly, these dictionary-style definitions suggest the range of patterns that may be identified within the type and consequently it is unlikely that all those listed for any entry would normally be recognized within one stimulus event. At every point throughout these definitions the phrase *all other factors remaining equal* should also be borne in mind.

I have kept the names of the types of humour free from technical terminology to try to make them as widely recognizable as possible. No judgement has, or should, be made on the apparent moral value of any of the instances of humour discussed herein, some of which may be considered offensive to some parties.

Finally, humour may be found in anything. These stimuli are not a list of all the places in which it may be enjoyed. They are, however, formats that constitute common stimuli to its activity.



Absurdity: In still and dynamic visuals absurdity is usually created by locational or applicative recontextualization or scale representations of physical entities. In activities and social interactions any such patterns are supplemented by executive and applicative recontextualization, in which actions are carried out in unusual ways with unusual instruments, or objects are put to different ends. Explicit linguistic absurdity is often based on positive repetition of sounds and linguistic forms, often with scale increases or decreases in length and complexity of the linguistic tag in comparison with the perceived meaning, sometimes in combination with intense *destructive* and *non-destructive punning*. Executive recontextualization also occurs in the use of original expressions for events or entities, sometimes requiring initial translation. Implicit linguistic absurdity involves the evocation of images, actions and concepts usual in its non-linguistic variety. In all absurdity the recontextualization tends to be conceptual rather than specific, appealing to retained notions of normality which are then represented in altered circumstances. Some modern comedies considered absurd are perhaps more accurately described as fantasy, since once the new environment becomes familiar it presents patterns more usual in non-absurdist humour such as positive repetition and completion.

Against the odds: Situations in which an individual achieves improbable success or in which some other unlikely event comes to pass occur *against the odds*, exhibiting a clear pattern of magnification between the values of expected success and that achieved in actuality. Failure may also produce equal and equivalent patterns of minification, yet depending on the severity of the matter the victim of the failure may not experience humour due to the *futility of dying happy*, which may also lead to altruistic suppression of reactions in observers. Also potentially recognized in such circumstances are patterns of executive recontextualization, based on either *error* humour or *I did it my way*.

Animals dressed as humans: The display of animals in human attire or apparently performing human activities exhibits any of several basic forms of recontextualization alongside positive repetition depending on the detail and the individual's apprehension of the stimuli. Appropriation of alternative abilities to animals (as with any property to any unit) is a form of qualitative recontextualization of the animal, yet if we judge those abilities or activities to have an identifiable origin and usual occurrence elsewhere (such as the ability to sit around a table playing cards or to wear jeans and chop wood belonging exclusively to human beings), then patterns of locational recontextualization may be recognized. Alternatively or compounding either of these patterns, interpretative recontextualization may occur of either a specific animal or its generic type, by which that which is displayed reinterprets prior information about the subject, positing a new way of looking at the unit in question. Positive repetition may or may not occur in any of these circumstances, where the activity of the animal is judged to be similar to that observed elsewhere in human beings, whether specifically or generically. Note that while placing a tutu on a dog may constitute locational recontextualization, unless the appearance or activity of the dog reminds us of a human being positive repetition will not occur. Translation is also common where individuals observe animals and interpret their behaviour as a sign of specific human motives or conscious thoughts, just as the expression provided by another human being may be translated into language or some other unarticulated form. Note this is distinct from the simple recognition of similar events between species which is recognized as the positive repetition of a situation the individual knows from personal experience. Where, for example, lines of penguins walking to the sea evoke humour, positive repetition of human behaviour has occurred.

Bad rhymes: Bad rhymes in songs or other lyrical literature are a common source of humour, and are founded on a combination of error humour and positive repetition. Usually the phonic similarity of the rhyme is emphasized despite its weakness or the explicit linguistic construct is altered in order to force a rhyme into the material. In the latter the executive recontextualization of the delivery of the words in question produces magnitude, whereby the greater the alteration the more amusing the attempt at the rhyme, followed by positive repetition of the two now similar-sounding words. In the former, the process of rhyming is executively recontextualized from what we know should constitute similarity (repetition of vowels and consonants or complete phonemes) to its alternative and less successful version here.

Banana skin: In formal *falling over* humour, the banana skin effectively functions as a facilitator rather than a source of humour itself. However, the peel may sometimes plays a predictively confirmatory role of positive repetition, whereby it is viewed by the audience before the victim and the ensuing fall is predicted. It consequently heralds in the associated patterns of *falling over* humour, most commonly orientational recontextualization (of the subject's physical form through different orientational contexts) compounded with an executive form in the recognition of the error of stepping in the wrong location (whereby the locomotive activity is apprehended in two variant contexts of avoidance of, and stepping on, the banana skin).

Big nose: A specific departure in unitary size from a generic type of a physical feature or characteristic may be found humorous if an equivalent pattern of magnification or minification is apprehended. If the scale change is witnessed in an observed individual, the alteration may lead to further patterns of qualitative recontextualization (of their appearance through its different contextual manifestations) and in either case positive repetition (of similarity to other entities or subjects) may be recognized.

Blankety blank: Expletives in sentences and interruptions before words are articulated leave a blank in the material stimulating the individual to provide the missing information in standard provoked completion. However, the blank may produce a further effect whereby it encourages a discrete recognition of the subject that is omitted. The provocation of the explicit formation of the word separates its superficial structure from its meaning and two units are perceived instead of one. Incomplete *limericks* and some forms of *innuendo* function on this basis.

Bushes start walking: Information that has previously been interpreted as inanimate will tend to evoke interpretative recontextualization if it suddenly becomes animated. This is a common device in formal humour, in which background scenery may be reinterpreted as active by moving unexpectedly. This is of course distinct from the scenario in which a character hides ineptly yet believes themselves to be unnoticed, which functions instead on the basics of *error* humour, whereby executive recontextualization of the process of hiding is often combined with patterns of scale in the inadequacy of cover that has been chosen, recognized as a minification of competence such as seen in *crap art*.

Candid camera: The variety of formal or informal humour in which a person is observed without their knowledge, usually compounded in its formal version by testing or provocative situations, is based fundamentally on interpretative recontextualization. The more extreme the situation and the more intense the reactions of the victim, the greater the magnitude between the subject's interpretation of the situation presented and that of the informed observers, such as from *disastrous event* to *harmless charade*. Further patterns of magnification or minification observed in their responses may also be recognized, and the positive repetition of *required response* humour occurs if the subjects react as the perpetrator wishes them to. Simple unacknowledged observation of a person in informal humour is also based on interpretative recontextualization (since the situation in which the subject finds themselves is presented in two different contexts: presumed isolation or privacy as they perceive it and the observer's alternative (and more correct) interpretation) and is often compounded by positive repetition of the observer's knowledge of the personality of the subject involved, in which their observed behaviour matches prior perceptions. Catching a person out by observing them acting in a prohibited manner involves the same interpretative recontextualization since the subject presumes they are unobserved, normally compounded by opposition between their actions and those enforced or recommended, along with the opposition inherent in any duplicity. Instances in which the subject is observed acting out a conversation or other activity also involve the potential recognition of completion (from the emulation of the entire event to the small proportion provided by the subject's physical activity) or, if the unprovided information is insignificant, a further layer of interpretative recontextualization from the reality of the event imagined by the subject to the artificial enactment observed by the individual.

Caricature: Caricature relates to all forms of portrait whether graphic, literary or performance-based, and is founded on a combination of magnification and implicit positive repetition. The characteristics of an individual are exaggerated in magnification, while simultaneously evoking a conceptual agreement that the correct aspect has been exaggerated. While the individual concurs with the artist that the subject really does have a big nose, they do not estimate the rendering as an accurate representation of its dimensions. The magnification that occurs does so by increasing the specific scale of the subject's features beyond the generic type expected by the individual. This is distinct from *mimicry*, however, in which there is no pattern of magnification, and an *explicit* positive repetition of the subject's characteristics. At the other end of the spectrum, the scale alteration of a subject's characteristics in the *hall of mirrors* requires no pattern of fidelity to complement it, functioning solely on the recognition of minification and magnification of aspects of the subject's physical form. Caricature therefore exists on a sliding scale somewhere between these two alternative scale types.

Catch phrases: Once the province of light entertainment and variety acts, some contemporary sketch-based comedy has embraced the catch phrase as a source of humour. Establishing and perpetuating a catch phrase exhibits clear positive repetition from one instance to the next, and predictive confirmation usually underpins its occurrence. The original instance of the catch phrase may or may not be considered amusing since it is often only with familiarity that humour is evoked. Occasionally the catch phrase may be recontextualized in some minor fashion to compound its recognition (usually through reapplication or reinterpretation), although the general activity of the format requires only fidelity to function.

Caught with their pants down: If the title is interpreted metaphorically, the discovery of a subject in a compromising situation is based on several patterns depending upon the details, and potentially but not necessarily represents an example of *hypocrisy* humour. Denial often accompanies such discoveries in patterns of opposition (between the subject's protestations and the individual's perceptions), and the newly revealed information invites interpretative recontextualization of the subject whereby they are viewed in a new light. The observation of the absence of clothing or the alteration of other associative properties in a literal interpretation of the title may lead to further patterns of qualitative recontextualization of the subject. The dropping of trousers in some physical humour produces a similar effect as well as an opposition of public and private (whereby entities generically

restricted to private viewing are made public) in the exposure of underwear. Further patterns of executive recontextualization often arise in subsequent attempts to locomote as seen in *silly walks*. Where the loss of trousers (or complete nudity) is enforced as a process of humiliation the usual patterns found in the bullying of *wet willies* and *wedgies* become apparent to further compound the situation, in combination with the *required response* of embarrassment and *you are not amused* humour (in the opposition of the perpetrator's amusement matched against the victim's lack of it). If a person's trousers fall down accidentally, patterns of minification of competence may be recognized (since keeping one's trousers up is considered a basic requirement) in addition to the usual qualitative recontextualization of their appearance and opposition of public and private.

Children say the funniest things: The variety of both formal and informal humour in which the comments of children amuse adults is based on various forms of recontextualization, translation and positive repetition. Expressions mispronounced or oddly delivered evoke the executive recontextualization of *error* humour or may alternatively invite translation if they are difficult to decipher. The confusion of two different ideas leads to further instances of this pattern along with double positive repetitions (otherwise known as *combination*). Expressions or assertions reminding the individual of the behaviour or attitudes of generic or specific adults is similar to *animals dressed as humans* humour and is based on locational recontextualization and positive repetition of both generic and specific adult activity. Striking and original expression is recognized as the same executive recontextualization regardless of the absence of error. As with most niche humour founded on a subject rather than a style, the over-riding pattern will be positive repetition, in which the individual recognizes specific or generic behaviour of their own experience in that which is transmitted.

Chinese whispers: The formal or informal humour in the passing of messages that become increasingly corrupt during their transmission is based on interpretative recontextualization, whereby the same information (the same sounds passed from one subject to the next) has been interpreted in variant contexts (the further in magnitude the concluding announcement is from the opening statement the more amusing it will be found). Positive repetition and opposition may also be recognized by a participant when intentionally transmitting a message *similar* to that he or she has heard rather than making a genuine attempt to pass that which was transmitted to them. Here the interpretative recontextualization of the information transmitted to

them is intentional instead of accidental, and will usually be facilitated by the identification of a connecting phonic similarity between the original unit and its substitute. The process of alteration may also produce an opposition between the attempted transmission of the message and its intentional sabotage.

Clap hands: The infantile game in which the child mirrors the clapping hands of the adult is based on two main patterns: opposition in the spatial reversal of their activity, and positive repetition in the temporal and often rhythmic repetition of the clapping. Applauding in adulthood is itself the communication of positive repetition in the form of concurrence and assent.

Clowning: Utilizing many of the elements of *slapstick* (executive recontextualization of physical activity in both *error* and *I did it my way* forms, alternate predictive confirmation and predictive opposition of accidents and other events, positive repetition of human forms to inflexible inanimate entities, balancing patterns of scale in the competitive strife between the characters and the qualitative recontextualizations and oppositions of *custard pie* humour), circus clowning also often features patterns of scale in the miniaturized vehicles and other apparatus. The clowns also exhibit clothing presenting patterns of magnification (in their shoes, clothes, noses and facial features) and qualitative recontextualization in their coloured hair. Their clothes are also often highly patterned (as was the court jester's) and their activity tends to be accompanied by the sounds of bangs and horns to add surprise to their generally exaggerated *comedic antics*.

Coincidences: The coincidence of two events is based on simple positive repetition, whereby the greater the precision of the events (the closer the time at which both parties arrive in the same location, for example, or the more exact the tastes of two people who meet in a public house), the greater the fidelity. The less the coincidence is expected, the more effective any such pattern will appear.

Comedic antics: Broadly speaking, when asked to perform in a comedic manner subjects tend to engage in physical *clowning*. However, they also tend to exaggerate their expressions, movements and gesticulations, as well as speeding up their delivery and animation. With the exclusion of *falling over* humour, the remaining aspects are heavily based on magnification of velocity, volume and physical activity. This instinctive association of

exaggeration with the comedic is a reminder of the importance of patterns of scale in basic perceptual capacities.

Come-uppance: The desire for a subject to get their just desserts creates a pattern of positive repetition if those desserts then come to pass, between the internal desire and the external actuality. There may then be ulterior patterns of opposition towards the subject and further patterns recognized within their reactions to the come-uppance.

Competitive spirit: Balancing patterns of scale, otherwise known as *competition* patterns in this specific format, exhibit the slide in stock between one party and another, as occurs in any competition or is often judged to occur in conversation about an ensuing or past encounter. "Fancy losing at chess?" is a simple example where a discrepancy in prowess, whether quantitatively defined or not, is established from an even starting balance. Any such imbalance may or may not then proceed into redress, rebalance and an opposite imbalance. Alternatively, the competitive drive may be simply identified as opposition in the spoiling for a fight whether an imbalance of prowess is identified as existing prior to the suggestion or not.

Dirty jokes: The traditional dirty joke has no particular pattern format, although it draws heavily on *innuendo*, translation and heightened discrete recognition of positive repetition through nervousness or immaturity regarding the subject matter as seen in *I know a rude word*. The surprise nature of discussing such matters at all and the desire to declare their facility with and comprehension of the subject matter may further extenuate the responses of those individuals listening to or communicating the joke.

Eat my dust: The formal or informal humour arising from situations in which an individual leaves another behind while they are deemed to be in direct or indirect competition is based mainly on opposition. Competition patterns may be recognized between the parties if the success of one is inextricably linked with the disadvantage of the other, or a simple reversal in fortune (in *turning the tables*) may be identified in either separate party. The basic forces of attempted hindrance create a fundamental opposition between the parties, but in circumstances involving a literal transfer of a commodity such as mud or dust locational recontextualization may also be recognized, leading potentially to qualitative recontextualization of the disadvantaged party.

Elephant scared of a mouse: Unlikely imbalances of power, fear or control are based fundamentally on patterns of scale. In the title example there is first an obvious dual-party pattern of scale whereby physical form is seen in two variant contexts, compounded by a conceptual reversal (an opposition) of the dominance expected in the relationship between the two. Depending on the details other patterns of magnification or minification of associated properties may be noticed within or between both parties, or potentially qualities expected to be identified in one may be relocated in the other (without reciprocation) in locational recontextualization.

Embarrassment: Humour founded on embarrassing a victim centres on two main sets of patterns: the positive repetition recognized in the evocation of the *required response* from the victim (whereby their embarrassment is anticipated and then effected), and the minification of a certain quality, whether maturity, dignity or any other value the victim would not wish to have reduced in public perception. Where no obvious minification exists, patterns of opposition in failures and thwarted efforts lead the victim to suspect a public reassessment of their abilities will occur. The habit of roasting a dignitary at a dinner or a wedding emphasizes the process of embarrassment humour by exaggerating the perception of scale differences between the victim as presented in an elevated position at the event and as they then appear, variably reduced in stature, in anecdotal evidence. However, there is an important pattern of interpretative recontextualization throughout embarrassment humour, whereby the same information is entertaining and enlightening to the individual but belittling and potentially damaging to the victim, and the greater the difference the stronger the pattern recognized by the observer. Further potential patterns exist in qualitative recontextualization (the sweating or blushing of the victim), along with *come-uppance* in their reactions if we wish to see them suffer. Used as a stimulus by parents to amuse either themselves or their offspring, embarrassment occurs usually in these situations by association, whereby the parent flaunts their own ineptitude in matters important to the offspring rather than publically declaring the children's incompetence, but in all other respects the humour remains the same. Embarrassment experienced by observers of comedy at the actions of the characters functions in the same way and occurs because the individual senses a (perhaps unwilling) involvement with their circumstances, although it should be made clear that embarrassment in these situations is never the cause of the humour, only an experiential adjunct.

Entity splitting: The splitting of entities is common in some forms of visual formal humour. Where all the elements are presented, whether simultaneously or sequentially, division is the major pattern being recognized. Where the absence is seen as a loss of a part that is no longer present, such a loss is viewed as qualitative recontextualization of the original entity. Note that splitting is distinct from the presentation of a unit to which we then add further detail in completion.

Error (operator, crap art, mispronunciation, linguistic and malapropism, missing your mouth, fashion, wrong end of the stick, mistaken identity):

Much error humour is based on executive recontextualization, whereby the process or action is recognized in two different contexts of execution, one successful and the other less so. The magnitude of the pattern is therefore dependent on the distance between the different contexts in which the activity is performed. **Operator error** refers to the attempted use of machinery or equipment, including most human faculties. The same unit (such as adding up the day's takings) is executed in multiple contexts (either generally as *badly* or *well* or specifically as in two different lots of arithmetical figures) and the magnitude between them assessed. In an associated form, **crap art**, if a subject's inept drawing or description of a subject arouses humour the same pattern of executive recontextualization may be identified, whereby it is the process of the representation of the entity that has been recontextualized in a sorry form, usually compounded with a very clear pattern of minification of competence, which may appear more significant if the recognition of patterns occurs due to the observation of publically commissioned or successful projects of any supposed value. Any instance of crap art also invites specific positive repetition to other entities or generic positive repetition to childish or immature attempts. **Mispronunciation** and other **linguistic** errors involve the same word or language expressed in different executions, often inviting completion (by which the individual provides an imaginary existence for the resultant mangled construct) or positive repetition to other words or ideas. **Malapropisms**, in which the subject employs an incorrect but similar-sounding word (such as 'He quite extorted me' for 'He quite exhausted me') involves first a pattern of positive repetition in the phonic similarity of the two words, along with applicative recontextualization in which the incorrect word is applied to a new meaning. Further patterns of positive repetition or opposition may also be recognized if those incorrect words are then deemed either especially appropriate or inappropriate for whatever reason. **Missing your mouth** also exhibits executive recontextualization in the physical eating process, along with locational recontextualization of the foodstuff

between the person's mouth and its alternative location. **Fashion** errors are largely executive recontextualization when recognized by observers from within a certain demographic (since most demographics, consciously or otherwise, judge certain sorts of clothing to be appropriate or correct for their group) and positive repetition from without, whereby the fashions of a different generation or other demographic remind the individual of other entities or peoples. However, where the humour is found in clothing matters more general than the specific constraints of fashion, it tends to reside in the recognition of patterns of magnification or minification of their dimensions, such as pants that are too short. **Wrong end of the stick** and **mistaken identity** are common formats whereby the same information (that which is stated in the former and that of the incorrect person in the latter) is treated differently by the multiple parties in interpretative recontextualization. The simple process of presuming two entities to be the same and subsequently recognizing their separate identities is based not on the recognition of dissimilarity but of interpretative recontextualization, whereby evidence of dissimilarity or individuality recontextualizes the information perceived as a single unit into two distinct forms. Mistaken identity may also lead to retrospective patterns of positive repetition of physical appearance.

Exchanging slaps: In some humour (often but not exclusively physical) the basic opposition between two parties is recognized as a pattern. Any such opposition often becomes absorbed into a meta-pattern of positive repetition, in which offences are reciprocated.

Exhilaration: The responses elicited by exhilaration may involve laughter on first experience. This is generally caused by a magnification of intensity, from expectations to experience, but it should not be overlooked that many stimuli resulting in such a response involve a magnification of velocity or a reorientation of the participant as well. There may or may not be a further intensification of the response by compounding neurological factors associated with adrenalized activity.

Face pulling: Amusement gained from pulling faces starts early in infancy and is based on qualitative recontextualization of the subject's identity in a similar way to *new hair cut* humour. The short-term nature of recontextualization in *face pulling* also encourages positive repetition of the event.

Falling in: Similar to *falling over*, falling in requires the presence of locational recontextualization to occur. This may be in combination with orientational and executive recontextualization (such as when a subject falls into a river having tripped over a step) but may exist without reorientation if the subject falls down a man hole or other opening (in which executive recontextualization will still be recognized if the process by which the event occurs was in evidence to the individual and evidently due to the subject's specific actions). The different material environment into which the unit falls ensures it is locationally recontextualized despite being potentially closer in distance than other units that are judged to exist within the same context, since different conditions prevail and different information is required to act upon it. Falling in may also occur intentionally, whereby locational recontextualization is recognized without a compounding pattern since error is absent. See entry in *substance humour* also.

Falling over: Perhaps the most basic form of physical humour, the only pattern actually necessary for *falling over* to be found amusing is orientational recontextualization, in which the human form is suddenly reoriented from the vertical to the horizontal. However, the process of doing so unintentionally will usually involve an error on the part of the subject, and consequently patterns of executive recontextualization are also common, whereby the locomotion or other physical activity is recognized as a unit arising in alternative executions. Note that in certain circumstances alternative execution also exists if the falling over is an intentional, non-error based aspect of a wider process, such as in the alternative and often acrobatically impressive physical formats of *silly walks* and *I did it my way* (common in *clowning* and *slapstick*), in which executive recontextualization still occurs but error does not. Walking errors without falling (such as stumbling) may also be recognized involving executive recontextualization but no reorientation. If the victim collides into another object this constitutes an opposition of forces, such that doing so and falling over may be recognized as executive recontextualization (the wrong direction to walk), opposition (in the colliding forces) and orientational recontextualization (in the fall itself). Note that in the case of collision there is only one source of error (stepping in the wrong direction) whereas there can be any number of causes for falling over or indeed the cause may be unclear. In the latter case the general process of locomotion is that which is executively recontextualized. There may or may not be further patterns of minification (either of a quality expressed in the subject before the fall, such as composure, or generically of a competence or physical prowess from an expected standard in human locomotion to the individual's poor

performance), opposition (in an attempt by the individual to continue as if nothing has happened), qualitative recontextualization (if the fall alters the appearance of the individual), completion of the faller's experience (if it is intense and significant) and positive repetition of other entities (especially of inanimate constructs as seen frequently in vintage slapstick films). If a person manages to fall down literally, constituting a downwards relocation rather than a reorientation, then the same patterns apply as for *falling in*. The precise nature of the patterns recognized is consequently dictated by the individual details of the fall and open to compounding on various fronts.

Farting: There are many forms of scatological humour but as a starting point, laughing at *farting* is generally based on one of two main forms. The first is *subversion displays* in which the ceremony of an occasion is minified by executive recontextualization of behaviour (based on the sonic properties of breaking wind), and an opposition similar to that of literal *caught with their pants down* humour between the public airing of private deeds. The second may amount to *mischievous* humour based on odorous properties, in which the *odious surprise* of the farting amuses the perpetrator due to the interpretative recontextualization between their knowledge of what awaits and the blithe ignorance of their companions. The companions' discovery of the truth then produces a positive repetition of *required response*. Further, since the offence is invariably less tolerable for others than the perpetrator there is an ongoing pattern of interpretative recontextualization of the situation to amuse the individual (who sees it as a mild offence for a necessary undertaking whereas the companions may see it as a disgusting reason to leave the room), and the more intense the responses of the companions the more significant both patterns will become. In *pull my finger* these *mischievous* humour elements of *required response* and interpretative recontextualization are stimulated by the apparently innocuous eponymous request only to be rewarded with (normally silent) farting. The use of the whoopy cushion is based mainly on positive repetition (of the sonic properties of farting), interpretative recontextualization (where teachers or others presume it is real farting, and opposition (where it is used to incriminate someone for something they haven't done). There are various associated situations to such humour, such as reciprocal farting (based on positive repetition of the farting and complicity between the individuals) and conversing about such issues either to make someone find it unpleasant (a combination of *repulsion* and *required response* humours) or because of an immaturity about the human body (leading to positive repetition while the function and the language remain distinct from each other). As with *I know a rude word*,

continued separation of the mental image of the activity from direct physical experiences, as opposed to separation from its linguistic representation, may provoke positive repetition at any occurrence of the associated events, and in situations in which the farting is not deployed in *mischievous* may account for the amusement found by some simply in its contemplation.

Flippancy: The attitude or activity referred to as flippancy is not so much a format of humour as an opposition of contrary emotional states but is worthy of consideration here for the purposes of clarification. Attempting to produce humour intentionally means concentrating on the transmission of patterns as the important element in one's social interaction rather than addressing the matter at hand, which may conflict with any emotional state exhibited by another who is preoccupied and concerned by the circumstances. Such inattention to the putative gravity of the situation is considered flippant. Behaving in a gleefully happy manner during another's sadness would be equivalently inappropriate but without the emphasis on pattern transmission is not usually considered flippant.

Funny verses: Whether poetry or song, the content of verses may rely on any patterns the author wishes. A clear and intense rhyming structure is usual to create unexpected and rapid positive repetitions and predictive confirmations in a similar but less standardized way to the established framework of *limericks* (see later). *Bad rhymes* are also often used, and songs parodying or copying certain styles tend to utilize applicative or interpretative recontextualization of the format alongside positive repetition of the sound. Where musical prowess is questioned the dominant pattern is the executive recontextualization of *error* humour.

Giggling fit: The inability to control laughter in inappropriate situations is often not merely a continuation of the original stimulus. While any other pattern may initiate it, a giggling fit is perpetuated by the repeated recognition of one or two patterns: a pattern of opposition, whereby an event the individual is attending is treated with gravity by the surrounding attendees and levity by the individual; and positive repetition whereby multiple individuals recognize the concurrence of each other's amusement (a potentially escalatory situation further inviting patterns of magnification between expected and actual responses). Any thwarted efforts on the part of the individual to curtail the laughter produce an ulterior pattern of opposition that may further extend the magnitude between the two contexts. Once the fit has begun, subsequent unrelated pattern recognition may lead

to exaggerated responses due to affirmatory neurological conditions and a further intensification of the perceived opposition in the contrary stances towards the surrounding event.

Hall of mirrors: One of the amusements at a traditional funfair, the *hall of mirrors* is a simple variety of formal humour whereby fairgoers walk through a room of mirrors featuring various warps to effect distortion of their reflections. The effect is to magnify or minify aspects of the individual's physique in different ways with each new mirror. Moving towards or away from the mirror also often effects dynamic alteration of the point at which the distortion impacts on the reflection. Beyond the patterns of scale, further patterns of qualitative recontextualization may be recognized, along with positive repetition of objects, animals or cartoon characters the individual resembles in the reflection. The observation of the individual's reflection in the back of a spoon has a similar basis in informal humour.

Human vs. machine: Inanimate objects may disintegrate or cease to function in the absence of human error, whereby any such dereliction may be seen to reflect the failure of a person acting on or associated with them (in positive repetition) or to be thwarting them intentionally (in opposition), potentially as a larger pattern of an ongoing battle (in balancing scale) between humans (generic or specific) and the inanimate world. The dereliction of the entity will also usually lead to a recognition of qualitative recontextualization of its identity with or without any of the preceding patterns, along with minification of the value or functionality of the apparatus. If the interaction is compounded by ineptitude on the part of the human the patterns may be compounded with executive recontextualization to produce a form of *operator error*.

Hypocrisy: Teaching one thing but acting differently often evokes informal humour and is based on a simple pattern of opposition in which the same matter is seen in contrary states between the hypocrite's words and their opposing actions. Secondary patterns of reversal or minification may also be identified in particular aspects of character appraisal.

I did it my way: Just as we may executively recontextualize an action into a context that we consider erroneous, we may recontextualize it into a context that is positively successful. Just as falling over may be considered a physical error, the same pattern of executive recontextualization may be applied to surprising success, in which an action is carried out in a specific departure

from the generic norm without any associated failure. This form of positive executive recontextualization, whether physical or otherwise, highlights the irrelevance of error to the recognition of patterns.

I know a rude word: The tendency to laugh at the simple articulation of a word because of its meaning is a common form of childhood humour. If the individual laughs at the word 'regina' because it sounds like 'vagina' there is first of all a clear positive repetition of phonic properties. However, when the individual giggles simply because the word 'vagina' has been used a pattern of internal and external positive repetition caused by a failure to absorb the word and its meaning into a form of direct communication has been recognized. Emotional immaturity about issues such as sex and bodily functions promotes a discrete recognition of word and meaning that would be absent in a more mature comprehension of the subject. Such separations sometimes continue beyond linguistic immaturity into the apprehension of physical forms, whereby apprehension of physical entities or experiences remains distinct from their internal meaning. There may also be patterns of opposition recognized in the notion that such words should not be articulated or physical forms exposed.

Innuendo: Innuendo often takes a similar form to punning with positive repetition in destructive forms and interpretative recontextualization when non-destructive. Translation or executive recontextualization may also be present in non-linguistic innuendo and in *I've never heard it put like that before* linguistic instances. The use of alternative expressions also invites exaggerated discrete recognition of the subject matter being addressed, similar to that occurring in *blankety blank* humour.

In jokes: While the patterns recognized within an *in joke* may take any form, the common factor in the type is its use to form a meta-pattern of positive repetition, much as a *catch phrase* does. The demonstrative use of such humour in front of others who are not aware of its significance emphasizes the complicity of those who respond (in further positive repetition) and the exclusion of others who do not, and their continued assent to its value marks their solidarity as a unit. There is consequently a tendency for the jokes to feature observational *it's so true* patterns concerning excluded parties, further demarcating and reinforcing boundaries and bonds, although any form of humour may and does occur within them.

Insult humour: Some insults rely on the disparaging presentation of specific information about an individual whereas the content of others has no personal basis except the enmity between the two parties, and involves the use of generic terminology to offend a person indiscriminately. Humour evoked by the latter is less common, although the enmity involved may be recognized as opposition in varying degrees of intensity. In the former the targeted and tailored insults may be recognized as patterns of positive repetition in *it's so true* humour, whether conceptually in isolation or in combination with magnification or minification to produce a form of *caricature*, or as an accurate presentation of negative aspects of the subject. Such insults are often employed in public in an attempt to garner and gauge support. The presentation of negative information observers judge to be surprising yet accurate will produce a pattern of positive repetition between the insult and supporting evidence in the mind of the individual and potentially, therefore, of complicity between the perpetrator's perceptions and the observer's. By pointing out flaws that others may not have noticed previously but to which they then provide their assent, the reward of humour presents a positive association for the individual not only with the perpetrator but with the opinion itself. The effect of laughter on the subject as the result of a public insult is potentially depressing since the more people who laugh, and the more they laugh, the greater the perceived accuracy of the insult. As a consequence they may be perceived to lose social status or respect, but caution must be exercised in the identification of patterns of scale to reflect the minification of such properties since such perceptual and social adjustments are often consequent or incidental to the humour. Where they are identified, however, especially during insult battles or similar dynamic events, competition patterns of balancing scale may be recognized between the individuals or factions, reflecting the balance of status between the two parties as insults (or *put-downs*) are effected, although the *futility of dying happy* tends to prevent the losing victim from being amused. However, the delivery of an insult does not necessitate the existence of a corresponding pattern of scale, since no loss may be sustained by the victim. Some infantile insults involve the use of the victim's name, whereby simple *punning* is used to highlight aspects of their character or appearance. Referring to the subject as David *Fatly* instead of David *Flatley* presents two patterns of positive repetition; of the phonic similarity of the two words, and of any putative weight issue between the point presented by the jibe and the perceptions of the individual. Note, however, that the put-down structure of perceived similarity to unappealing entities or properties need exhibit no basis in explicit fidelity. *Your face my arse* insults do not involve any

visual positive repetition of *face* and *arse* but a conceptual statement that the person's face is unattractive (and in this case specifically less attractive than the perpetrator's, potentially producing a competition pattern of balancing scale). Provided the value of the comparative context is seen repeated in another unit, positive repetition has occurred, and provided the individual does not question the minification of the property suggested, it may be seen to fall below a generically expected value without direct evidence to support the insult. However, any such insult also producing a pattern of positive repetition (whether explicitly or implicitly) will form a compound and evoke a more intense response. It should also be noted that insults do not exist solely to produce humour. They do so in order to communicate enmity, to criticize forcefully or to display differences in power or status in a non-physical manner. The frequent use of intense insults by warring couples in isolation is rarely intended to evoke a humorous response.

Irony: The nature of irony is fundamentally an opposition between two states. As a popular concept it involves the recognition that this opposition presents or highlights a compromising or undermining negativity. As with all patterns, the stronger the opposition, the more effective the irony. Whereas forms such as *sarcasm* are statement-based, any situation may be considered ironic. *Hypocrisy* humour features irony in that words and actions are seen to express an opposition on the same subject (the unit) in a manner that compromises the speaker. On occasion this opposition may be implicit rather than explicit. The ironic scenario in which a person decides they wish to get away from city life only to end up in another one exhibits opposition, where the unit is their moving seen in two contrary contexts of *escaping city life* and *returning to city life*.

It's behind you: The pantomime humour of it's behind you is based around interpretative recontextualization, whereby the same information is viewed in different interpretations by the individual in the audience and the character on stage, such that the audience is aware of the presence of the undesirable but the character being warned is not. Further, since in most cases the character then proceeds to move about, the phrase it's behind you continues to be interpretatively recontextualized throughout its uses, also leading to opposition in the ongoing thwarted efforts to communicate the message meaningfully. Meta-patterns of positive repetition are also usually established throughout the show.

It's so true: In formal comedy it's so true is a style of observational stand-up in which the comedian presents ideas and seeks assent from the audience in the form of positive repetition, in which the performer's perceptions are judged to match the individual's. In informal humour, however, it simply refers to any situation in which a shared assent or agreement with another's observation occurs. Simple statements of truth will not be recognized as patterns unless discrete recognition occurs for whatever reason perceptual or conceptual since verity as an abstract has no influence on the mechanism of humour. A statement apprehended in direct communication, the verity of which is subsequently assessed intellectually (and which even potentially elicits surprise) will fail to meet the necessary conditions of humour. The separation of prerequisite conditions is discussed further elsewhere in this volume.

I've never heard it put like that before: The originality of an expression used to communicate an idea may require initial translation in fidelity. Later, it may be viewed as an executive recontextualization of the manner in which a certain meaning may be communicated. Translation may continue to occur between multiple media (such as gesticulations and words) much longer than between different aspects of the same medium, in which recontextualization is more likely to be identified once initial translation has occurred. At the same time the unit being described may undergo qualitative recontextualization and be seen in a new light, or simple positive repetition due to its variant apprehension.

Limericks (complete and incomplete versions): A simple doggerel verse intended to amuse, a limerick follows a set structure of rhythm and rhyme. In *complete limericks* familiarity with the rhyme structure provokes anticipation of its fulfilment, and even if there is no clear prediction of the nature this will take, its completion is utilized to facilitate the recognition of other patterns projected onto the framework, often in either interpretative recontextualization or positive repetition. In *incomplete limericks* the final word or few words are omitted, often due to interruption, compounding the usual structure with *blankety blank* completion, in which the concluding omission exaggerates the individual's apprehension of discrete recognition by separating the occurrence of the word from its meaning.

Linguistic reinterpretation (semantic and syntactical): Distinct from *punning* in that the multiple meanings are not restricted to single words or points within a sentence and may be intentional or otherwise, linguistic

reinterpretation may be either semantic or syntactical and is composed of interpretative recontextualization. **Syntactical linguistic reinterpretation** occurs when the semantic definition of the constituent words remains unchanged despite a new interpretation being effected due to variant relationships of the parts of speech. The statement *the subject did not fall down and break their leg* is syntactically reinterpreted if it is later discovered that the subject did indeed fall down but only twisted their ankle. Recontextualization is enabled by the syntactical nature of syllepsis, from the implied *the subject did not [fall down] and neither [did they break their leg] to the subject did not [fall down and break their leg]*. In this particular case such an interpretation thereby allows a reversal of the initial presumption that the subject had not fallen down at all. **Semantic linguistic reinterpretation** is the simple use of multiple interpretations based on the meanings of the words appearing in a single statement or other linguistic construct.

New hair cut: Humour arising from a person adopting a new style or appearance is based on the recognition of qualitative recontextualization. The persistent identity of the subject, or their facial or physical appearance, forms the unit that is repeated through different contexts of qualitative manifestation. There is, further, the potential for patterns of positive repetition between their new appearance and other subjects, entities or species.

Made you look: The supply of disinformation is a sub-category of *mischief* humour. In *made you look* a subject is misinformed about the state of an object to which their attention is drawn. If the subject reacts by proceeding to examine the object in question it constitutes a pattern of *required response* in the perpetrator between the stages of the reaction they wish to elicit and the actuality of the subject's response. Compounding this is the secondary pattern of interpretative recontextualization, in which an apparently helpful statement of fact is reinterpreted as a misleading ruse. Note that the reinterpretation is not sequential for the perpetrator (in that there is no delay between a knowledge of the two states) but simultaneous. However, the moment of reinterpretation presented by the subject refreshes the pattern in the perpetrator's mind. In such humour the recontextualization is experientially negative for the victim, in that the first interpretation is more positive than the second. This is in contrast to *play ambush* humour, in which the secondary interpretation is substantially preferable to the earlier possibility. As a consequence, there is a tendency for such recontextualizations to be unamusing for the victim, whose emotional defences may be alerted by such unsettling treatment.

Make the fat boy run: Subjecting a person deemed unsuited to a certain activity to an enforced involvement in it occurs both formally and informally. Humour arising does so from the presumed inability of the victim appearing in positive repetition, displaying the desired *required response*, along with the opposition inherent in their being forced to undertake an action they do not wish to and to which they are fundamentally unsuited (such that the activity is seen in two contexts of contrary forces of *not wanting to* and *being forced to*). The *required response* will usually also take the form of executive recontextualization in their poor performance of the activity. Further patterns of opposition formed around the amusement of the perpetrators and the lack of it in the victim may also be recognized in *you are not amused*, and in the title example further *wobbling* and other patterns of positive repetition of similarity to other entities, subjects or species may also be identified.

Mime: Where the activities of a mime artist are found amusing the patterns being recognized are based on the processes of (often hybridized) translation and completion, the latter of which constitutes the form most likely to be recognized in a skilful performance. The activities of the mime are supplemented with information to complete the event internally.

Mimicry: Note that while mimicry is based fundamentally on fidelity, an impersonation of a person who is significantly different from the impersonator may produce a pattern of recontextualization of their identity.

Mischief (scare, provocation, odious surprise, time capsule, disinformation, discomfort, behind your back): Mischief humour takes many forms based around pranks and practical joking that are connected by the general intention to elicit the *required response* from the victim in positive repetition between the goals of the perpetrator and the actuality of the victim's reactions, often in combination with interpretative recontextualization, by which the victim's interpretation of the situation is distinctly different from the perpetrator's. In circumstances where the victim is absent at the point of mischief this reaction may be imagined rather than witnessed by the perpetrator, rendering both stages of the pattern internal. Mischief leading to significant experiential alteration may also evoke patterns of completion in an observer, and any process involving working against another party, such as hindering their progress, involves a simple opposition of forces. While many other patterns may compound an instance of mischief, **scare** humour (such as frightening the victim with a supernatural hoax) relies mainly on interpretative recontextualization, whereby the more

extreme the reactions of the victim the greater both the *required response* pattern and the interpretative recontextualization between the two parties. **Provocation** humour is based on the irritation of the victim, usually by the positive repetition of activities eliciting the *required response*. The ongoing loss of patience or increase in anger of the victim may be interpreted as an approach of the required response or as patterns of minification and magnification in their own right. This form of mischief is often used by children to irritate adults into submission and acquiescence to their desires but is not restricted to childhood. **Odious surprise** involves the sort of activity in *farting* where the victim is forced to experience an unpleasant sensation, potentially evoking completion, positive repetition in *required response* and interpretative recontextualization before and at the point of the victim's recognition. Such formats are similar to **time capsule** mischief, in which an inconvenience is laid for discovery in the future by either a specific victim or by anyone it happens to affect, often with long-term slow release effects, such as the odours caused by rotting vegetables under floor boards. Again, the major patterns recognized by the perpetrator are projected *required response* and interpretative recontextualization, whereby the same situation exhibits two distinct interpretations from the moment the mischief is undertaken, one in which the situation appears innocuous or even positive to the victim and a simultaneous alternative available to the perpetrator in which the full implications are understood. The less aware of any mischief the victim appears and the more intense the mischief, the greater the magnitude of the interpretations. **Disinformation** occurs in much mischief humour in the form of interpretative recontextualization, but it also arises in simple forms of denial and other opposition. **Discomfort** is a similar form to *odious surprise* but involves effects that are longer term, more personal and without obvious provenance and may lead to qualitative recontextualization of the victim either through physical appearance or behaviour. **Behind your back** consists of humour arising from activities executed literally behind a victim's back of which they are unaware, such as hand signals or face pulling produced for the benefit of the camera, and is consequently based around interpretative recontextualization, with *required response* possible at the point of the victim's viewing of the final photograph. Throughout all mischief humour it is of course necessary to consider that there may also be patterns of balancing scale involved in competition between the parties of perpetrator and victim, potentially involving *revenge*. Also see *made you look*.

Nervous laughter: Not a form of humour but the tendency to laugh more in the wake of or as a direct response to the relief or continuation of threatening situations, nervous laughter is evoked by two main patterns. In relief, the humorous element is evoked by the recognition of interpretative recontextualization, from the apparently serious implications of the event as it occurs to its less concerning state, in a similar manner to *play ambush*. Laughter also reduces stress levels and so the tendency to utilize humour during or consequent to such events is an instinctive application (much as hugging a distressed person is), and exaggerated humorous responses also confirm complicity and mutual support in positive repetition between nervous parties. Efforts at eliciting the laughter of others by frequent quipping when the individual is nervous constitutes an attempt to receive such confirmatory support. Both nervous laughter and nervous quipping are suspended once the situation is deemed beyond recovery, due to the *futility of dying happy*.

Noises off: The partial presentation of information is common in formal humour whereby sounds or glimpses of the situation provoke the individual's imagination of the whole scenario. If the two units appear appropriate yet surprising, humour may be evoked via the pattern of completion. This intentional provocation is distinct from the unprovoked completion that may occur to the individual's mind from the presentation of any information either formal or informal.

Non-sequiteur: An intentional conversational interjection that bears no relevance to any prior referent and that interrupts the flow is often referred to as a non-sequiteur. As a device for derailing social interaction patterns of opposition may be recognized between attempts to continue and the intention to thwart the conversation. Their general effect may be recognized as minification of the importance of the prior concerns, which their utterance is often intended to undercut. Their implied commentary on the redundancy of the prior conversation may also be recognized in positive repetition (complicity of view) by observers. Any further patterns may also be recognized by the individual in the specifics of the non-sequiteur.

Parody: The reproduction of information in a manner that intentionally exaggerates its weaknesses in action is based on two main patterns, the first of positive repetition (usually of the style or delivery of the piece), the second of magnification or minification of certain attributes to highlight its failings, such that it is effectively caricature in literary media. The intention is to reduce the standing of the subject, and if the attack is sufficiently audacious,

further patterns of minification may be identified by the individual between the value traditionally attached to such material and that presented in the parody.

Passing the buck: Escaping the burden of work by conniving to pass it on to one's colleagues is a common source of informal humour, exhibiting many of the attributes of *mischief* humour in completion and *required response* of the experiences of the newly affected colleague but also in the dominant locational recontextualization of the undesired work. Interpretative recontextualization may also occur depending on to what extent the buck is disguised during relocation. Where no buck is passed but an individual finds the burden of another amusing, interpretative recontextualization of the situation may still occur, since the announcement or occurrence of the same information has very different meanings for the person having to undertake the onerous task and the individual who is spared. Further patterns of completion may also then be recognized.

Peek-a-boo: The childhood game involving the fleeting presentation of an entity, whether an inanimate toy or the adult themselves, is based on positive repetition in all cases. However, forms of the game involving the complete removal or occlusion of the fleeting entity evoke locational recontextualization, and may also lead to the recognition of completion whereby the perceived situation is supplemented by the information regarding the hidden unit. Later stages of cognitive development will enable greater occlusion and longer pauses between presentations. The same effect is also produced by blinking, initiating the first instances of recontextualization exhibited in *face pulling*.

Picture captions: A type of formal humour in which photographic or artistic pictures are supplemented with captions. In panel games the picture is presented first uncaptioned as suggestions are requested. The addition of the caption leads either to an interpretative recontextualization or a completion of the visual information depending on the nature of the individual's initial apprehension of the information and the manner of the caption supplied. Note therefore that either fidelity or magnitude may be sought. In some instances translation may also occur. Note that even where the picture and the caption are presented side by side (as in graphic still-frame cartoons), the larger graphical picture will generally be apprehended first. Many political still-frame cartoon captions rely not so much on reinterpretation as completion (often simply as in the speech of a character depicted) leading to an appeal

for concurrence in the form of *it's so true* positive repetition. The same process may also occur if the caption is apprehended before the visual.

Play ambush: The mock fright involved in jumping out on a friend is an extension of childhood games. The infantile game of *peek-a-boo* develops as the child matures to a much more dangerous game of *play ambush*, involving a potentially frightening recontextualization with locational and interpretative elements. The situation is reinterpreted from threatening to playful (exhibiting a positive direction of recontextualization, whereby the secondary interpretation is preferable to the first, avoiding any circumvention of the humorous process evident in some forms of recontextualization from the positive to the negative), along with sudden locational recontextualization of the perpetrator from their presumed location elsewhere. The first of these may evoke humour in either perpetrator or victim, whereas the second generally affects only the latter but may be experienced altruistically by the perpetrator also. Further patterns of *required response*, however, may also be recognized by the perpetrator.

Props: A popular game in comedic improvisation involves the provision of apparently useless and artificial props to the performer, who then imagines and enacts their utilization in varied ways. Two major patterns are readily recognized; the first the translation of the performer's tableau into a naturalistic form its analogous representation here is judged to resemble, the second the interpretative recontextualization of the prop from one instance to the next. Some instances of the game use intentionally large props to add a further level of patterns of scale to the images presented.

Punning (destructive, non-destructive): Punning is basically a form of wordplay in which multiple meanings are employed simultaneously. There are many forms utilizing a range of patterns. However, in general terms they can be divided into two main types: **Destructive punning** relies fundamentally on positive repetition, in which the phonic similarity of two separate units affords a location for the expression of further forms of positive repetition, whereby referents supplied earlier by precursory information are recalled. It is called *destructive* because the moment of the pun itself can only relate to more than one referent when corrupted. **Non-destructive punning** works on a similar structure but is effected not by the phonic similarity of multiple units but by the polysemic nature of one, removing any necessity for corruption. The two resultant simultaneous interpretations are supported by referential patterns of positive repetition as in *destructive punning*. Some forms of

punning are similar to *linguistic error* humour, which features a further pattern of executive recontextualization in the magnitude of the language between the intention and the manifestation, although errors often involve fewer or no patterns of positive repetition in the form of referents for the corrupted construct. The attraction to fidelity in punning is simply illustrated by comparing the two alternative puns of a *game of cat and moth* and a *game of cat and louse*, in which the second exhibits (depending on judgement) a greater similarity to the original expression a *game of cat and mouse*. Note that examining these two corrupted expressions in isolation has separated them from any causality of reference to either the moth or the louse and the expression itself, which would otherwise have generated the two referential patterns of positive repetition mentioned above to accompany that of phonic similarity.

Read my signs: A very common constituent of both formal and informal humour, the interpretation of appropriate facial expressions or gesticulations leads not to recontextualization but translation of the information from the unit as presented in one medium into another in an analogous form. The more appropriate the expression is assessed to be for the translated meaning in the context of the circumstances the greater the fidelity and strength of the pattern. Facial expressions and gesticulations are of course common elements of all human interaction, and consequently only those deemed both significant and surprising will potentially evoke humour. Qualitative recontextualization of the identity of the person may also be recognized depending on the degree of significance.

Repulsion: Humour may be evoked both formally and informally by the observation of behaviour considered repulsive, whether a person ingests foul substances (commonly such as earth worms in childhood) or is subjected (or subjects themselves) to other unpleasant experiences. The common pattern recognized throughout the type is completion, in which the situation observed is compounded with further information in the form of experiential detail, whether memories or imaginations of sensations, feelings or other subjective states. The comparison of the two together produces a potential daisy chain of units from the stimulus to the individual and back again, as elements of the experience echo between them. A further frequent factor of repulsion exists in the applicative recontextualization of the entity being experienced, such as where a worm is recontextualized as food. Executive recontextualization may potentially also be recognized in the process (such as eating) to which the unappealing unit is applied.

Required response: Eliciting a predicted response from a subject is based on the recognition of positive repetition, from intended reaction to the actuality of the event. Apprehension of the response must still surprise, however, despite the foresight, otherwise humour will not be evoked. Such humour is common in forms of bullying, but also in many other formal and informal situations unrelated to intimidation.

Revelation: Formal humour (especially sketch-based comedy) often uses a device whereby important information regarding a situation is withheld until the conclusion. Consequently it may be based on completion (in this case where both units are provided for the individual) or interpretative recontextualization of the circumstances, where the unit (the situation) is interpreted in two distinct forms, the first based on the information provided up until the point of revelation and the second with the benefit of the revelatory additions. Informal humour also arises regularly on an equivalent basis as an accident of the communication of information.

Revenge: The exaction of successful revenge is related to the format referred to as *come-uppance* humour. However, further patterns of balancing scale are often active in the recognition of the redress, and the potential for further patterns in the nature of the revenge itself should not be overlooked.

Reversals in fortune: While some reversals may involve dynamic alteration as the name implies from progress in one direction to progress in a contrary direction, most popularly recognized reversals involve little more than switching between static polarities. Either constitutes an opposition in pattern recognition. Success and failure are polar opposites between which sudden changes (from negative to positive or positive to negative) may evoke humour if the reversal is significant. However, progression from positive to negative fortune is less commonly amusing for the individual experiencing it due to the *futility of dying happy*, and the responses of observing individuals may therefore also be circumvented or reduced out of altruism. However, it can not be emphasized enough that humour is not automatically denied by such circumstances and its evocation is dependent upon the cognitive activity of the individual at that precise moment. The preponderance of reversals in a positive direction leading to humour has been partially responsible for the incorrect interpretation that happiness can lead to laughter unstimulated by and without the involvement of the faculty of humour.

Sarcasm: A statement that criticizes the assumptions or ideas of another person through the use of *irony*, whether implicit or explicit, is known as sarcasm. Although based on *irony* there is no necessity for the negativity inherent in sarcasm to exhibit any form of explicit opposition as one may at first presume. Pronouncing a withering ‘I don’t know’ in response to an enquiry constitutes sarcasm the same as lauding someone ‘the man of the hour’ who has failed to distinguish himself in any way, but the patterns of opposition manifest themselves in different forms; implicit in the first and explicit in the second. The exaggeration in the former is a pattern of scale, intensifying an opposition between the assumption on the part of the enquirer that the question is reasonable and the alternate contextual state from the responder that it is not. Nonetheless this sarcastic comment is, although an exaggeration indicative of an opposition, an explicit statement of truth, in contrast to the declaration of falsehood exhibited by the latter. Consequently certain forms of sarcasm may be superficially misleading during initial analysis.

Satire: A broad category of humour intended to effect a reduction in reputation or social standing, patterns of scale occur in satire usually due to its use of *caricature*. Otherwise the humour is most commonly founded on observational statements of *it’s so true* positive repetition, although other types are common.

Saving a falling glass: Situations in which a deft reaction produces a successful result involve the recognition of positive repetition. The intended rescue forms the first unit and the actuality of its success supplies a second for comparison. Depending on circumstances, *reversals of fortune* may also be recognized in the success, which if substantial may also evoke patterns of scale based on against the odds. If the process of saving is particularly original, it may also be recognized as I did it my way in executive recontextualization.

Schadenfreude: Caution must be exercised in identifying pleasure at the misfortune of others as a form of humour. Most frequently where it appears to occur the humour is caused by patterns unrelated to the suffering, and any concomitant pleasure regarding another’s misfortune is incidental to its mechanism and founded on perceptions and emotions that are, at best, adjuncts to the humour. However, in certain circumstances competition patterns (balancing patterns of scale based on the perceived stock of two parties) may be recognized by the individual where the values of the

individual increase as those of another fall. *Come-uppance* humour may also be attached to apparent misfortune, as may the *required response* of many forms of bullying. Sudden minification of a person's stock may also evoke humour, either specifically as the unit reduces in scale or as a generic-specific cross whereby their fortunes drop below a clearly established or expected norm. The important point in all of these instances is that it is not the misfortune of another that is the stimulus to humour but the patterns recognized behind or associated with it; the misfortune constitutes simply a psychological interpretation of elements of the stimulus, not the source of amusement itself.

Separated at birth: The comparison of photographic or similar images involving persons recognizable to the individual is based on simple positive repetition on an external basis. The greater the similarity the greater the fidelity and the stronger the pattern.

Silly names: The informal occurrence of silly names for people, products or places or their use in formal humour may evoke the recognition of various patterns. First is the positive repetition of sound and meaning to other ideas and entities, which may in themselves evoke further patterns of completion, positive repetition, opposition (in the form of *irony*) or qualitative recontextualization regarding the character of the name-holder, often through their similarity to childish or inappropriate entities or sounds. Highly repetitive sounds are also common featuring their own internal patterns of positive repetition. Further, the lengths of silly names are often inappropriate or excessive, producing patterns of scale. Generic qualitative recontextualization of whichever type of name is involved is also potentially recognized, whether town, country, personal first or surname, product or business and so on. For example, contemporary surnames are generally expected to feature no apparent meaning, designating only the person to whom they refer rather than properties associated with them (whether imaginary or real) and their qualitative recontextualization into a meaningful communication is potentially both significant and surprising. However, even a minor variation in sound or structure from generic expectations is sufficient to recontextualize conceptual qualities of the type. Completion of the subject's appearance or character from the content of the silly name is also common.

Silly noises: There are many forms of silly noise, and humour based on their occurrence may be caused by any of various patterns depending on the

agent, the medium and the individual. All noises may involve the recognition of completion by evoking the imagination of entities or activities. Many sounds such as squeaking or honking create a positive repetition of the phonic qualities of childish, animalistic or other activities. Sounds may also exhibit generic or specific patterns of magnification or minification of their velocity or pitch leading to humour in their new contextual state. Where noises of a particular kind are expected the occurrence of alternative versions constitutes qualitative recontextualization of the sonic aspect of the event or executive recontextualization of the action of performing whatever process the sound accompanies. Where such sounds are significantly different and surprising humour may occur. The occurrence of sounds in objects unexpectedly (such as squeaking when a shoe is walked on) may lead to the recognition of qualitative recontextualization of the entity. Further, the occurrence of sounds associated with one event in an alternative may lead to the recognition of locational or applicative recontextualization.

Silly voices: Whether generically or specifically and formally or informally, silly voices rely mainly on executive recontextualization as their constituent pattern, whereby the process of speaking is presented in alternative manifestations. Further patterns of positive repetition may also occur if the voices sound similar to other sounds or other voices, and the precise nature of the silly voice may feature significant patterns of extremities apprehended as patterns of scale. Note the ability of silly voices to arouse humour is not dependent on their being either intentional or accidental, since it is the contextual width of execution that forms the stimulus to humour, not the inability of the subject.

Silly walks: The human locomotive process is executively recontextualized in physical formats such as silly walks. Ulterior patterns of positive repetition of recognizable entities or generic or specific qualitative recontextualization may also occur. Minification or magnification of effort, reach and stride may also be identified. Note the similarity of silly walks to instances of walking errors yet the marked absence of any implied or perceived minification of competence.

Simultaneous activity: Whether speech from multiple persons delivered with one voice, or other movement or activity occurring at the same time, simultaneity of action presents patterns of spatial positive repetition (as opposed to temporal positive repetition in which the information is repeated sequentially at different times), whereby the similar activity repeats with

different spatial coordinates. It may occur either formally or informally, and sometimes combines with further positive repetition if it underlines the unanimity of opinion towards an event or dual-party patterns of scale if it asserts a balance of opinion. Recognition is not restricted to human involvement, however, since any simultaneous similar activities may create the pattern, including inanimate processes.

Slapstick: The use of physical humour such as *falling over*, *custard pie*, *slip-sliding* and *clowning* in repeated doses for formal comedic ends constitutes slapstick. Importantly, however, while executive recontextualization occurs in *falling over* as a form of *error*, in slapstick it occurs as both *error* and its impressive counterpart, *I did it my way*, often switching between the two as a device to engender surprise and provoked recognition of opposition (between the intentional and the accidental, the acrobatic and the inept). Both predictive confirmation and predictive opposition are also common in vintage slapstick, whereby the prediction of an accident is often first confirmed and later denied when it next occurs (or vice versa). Further patterns of positive repetition are common in vintage slapstick between the inanimate inflexibility of the scenery and the movements of the characters, often again exhibiting reversals (opposition) in the manifestation of their properties. Balancing patterns of scale and other forms of opposition are also common in the strife between the characters involved, and the usual qualitative recontextualizations may be recognized in the frequent use of *substance* humour.

Slip-sliding: Often but not exclusively an element of *slapstick* or other human physical humour, when a person or other entity attempts to propel itself forward and is unsuccessful despite the motion of the apparatus by which they would normally be propelled, humour may arise. The opposition inherent in thwarted efforts is intensified the greater the effort expended and the less the success achieved. Further patterns of executive recontextualization of locomotion may also be recognized.

Spoonerisms: The process of swapping phonemes (such as ‘nack blight’ for ‘black night’) involves basic locational recontextualization. In cases where it is used to create *innuendo* the altered state produces heightened discrete recognition as in *blankety blank* humour. Other patterns of positive repetition to other ideas may or may not exist after the recontextualization but are not necessary for humour to occur.

Standing on a rake: The specific variety of **slapstick** humour in which a person stands on and is hit in the face by a rake is based on the **error** humour of executive recontextualization (of where to stand) leading to opposition of rake and face (of two contrary forces colliding). There is also a potential intermediate stage of orientational recontextualization as the rake rises, along with potential completion of how a rake in the face would feel to the individual.

Substance (custard pie, food fight, falling in): Humour found in the throwing, transfer or interaction with substances of a liquid or semi-solid nature is based on the potential recognition of various patterns. **Custard pie** humour involves qualitative recontextualization of the recipient’s identity, opposition between the characters involved and a fundamental applicative recontextualization of the foodstuff being used to perform the assault. All qualitative recontextualizations may further lead to the recognition of positive repetition as images of other entities or species are evoked. Full-scale **food fights** feature similar patterns along with qualitative recontextualization of the event at which they occur and often exhibit magnification in their rapid escalation and positive repetition to infantile or bellicose pursuits. **Falling in** humour is minorly different from *falling over* since it necessarily involves the subject’s contact with a substance which may or may not effect qualitative recontextualization of their identity. Further, while *falling over* involves executive and orientational recontextualization, the entry into a different substance may encourage the recognition of a further level of locational recontextualization if it is assessed to constitute a change in location. Movement two feet in one direction may not be assessed as a new locational context yet movement to the same extent in an opposite direction may indeed be considered so if it involves a new state or condition, such that moving from dry land to water may be deemed to constitute a relocation regardless of the distance involved (see separate entry also). Further, all forms of substance humour may involve the recognition of completion.

Subversion displays: Some forms of subversive display exhibit common pattern bases that may evoke humour, usually involving the flouting of rules in an attempt to impress peers. Activity undertaken is, by definition, executively recontextualized in the manner of *I did it my way*. Further, the subversion occurs towards an authority of some form, and there are therefore clear patterns of opposition to defined instruction and regulation, potentially compounded with competition patterns of scale. While such humour is used to impress peers this is an application of humour and not a function of the

faculty.

Surprise party: Surprise in isolation is not a sufficient condition to produce humour. However, its incidence at events considered to be founded on surprise has made it appear so. A surprise birthday party may or may not produce laughter in the subject, but when it does so it is dependent on the same mechanism as in any other instance. The first pattern involves substantial locational recontextualization of the people attending (from wherever the individual presumed they were to the venue of the party), followed by interpretative recontextualization of the event the individual was under the impression they were about to attend. Further recognition of the complicity of the guests and their recent behaviour may also lead to interpretative recontextualization of specific prior occurrences. In the absence of a full party, the simple presentation of a surprise birthday cake will only be found humorous if the prior situation is reapprehended in two interpretations (the original innocent interpretation and the second with the benefit of hindsight), which is common but not necessary. Without such recontextualization the cake is simply an unexpected event, and unless it forms a unit in an ulterior pattern, perhaps of unexpected positive repetition, will not be found amusing. The amusement of guests observing the event is founded just as much on the same interpretative recontextualization (refreshed at the point of the individual's recognition) but also on the recognition of *required response*.

That shut them up: Sudden cessation of activity exhibits a presentation of alternate states, from *on* to *off*. The abrupt reduction in a person's crowing or superior attitude may consequently be recognized as either cessation (and therefore opposition), or minification of the property in question. Patterns of balancing scale may also be recognized in competitive states or *revenge*, or positive repetition in *come-uppance* if the cessation was desired.

Thwarted efforts: The simple process of opposition by which an attempt is prevented from succeeding. Since it relies on contrary forces the unit will usually be the nature of the attempted achievement, presented in two contextually opposing forms such as *attempted or desired by subject A* and *thwarted or prevented by B*.

Tickling: The majority of instances of humour arising in tickling are caused by the variety of interpretative recontextualization observed in *play ambush*, whereby the instinctive reaction to the attack as a harmful event is reinterpreted in playful terms. Commonly compounding this is the recognition of positive repetition in a fleeting *peek-a-boo* technique of pausing, allowing the victim

to anticipate, and then repeating the attack (otherwise known as predictive confirmation). The same interpretative recontextualization also holds true for the perpetrator (although perhaps to a lesser degree) due to pattern refreshment at the point of the victim's recognition. The perpetrator is also likely to recognize positive repetition in the *required response* associated with the victim's reactions, whereby the desired effect is first anticipated and then confirmed by the actuality of the event.¹⁶

Tower block demolition: The infantile game of building up and then knocking down a tower of blocks or similar materials involves two main stages of different patterns. The process of first building the tower may amuse if applicative recontextualization of the building blocks is recognized, and also serves to establish anticipation of the second stage, in which the blocks are sent tumbling or flying across the room in a very effective and sudden locational recontextualization, also confirming the earlier anticipation in positive repetition. The game, as with most infantile games, is usually repeated many times.

Trust you to do that: Events that, while surprising, are on reflection considered the typical behaviour of their perpetrator, evoke simple internal and external positive repetition between their activity and the individual's knowledge of their character.

Turning the tables: Similar to *revenge* in some cases, turning the tables simply involves the reversal of a situation. It is usually recognized as a simple opposition but may, in certain circumstances, be recognized as a balancing pattern of scale if there are dramatic changes in values linked by an inverse correlation between the two parties experiencing the reversal.

Unconvincing actors: Humour evoked by the observation of wobbling film

¹⁶ There remains an aspect to tickling and similar bodily sensations apparently unconnected to humour, whereby in some cases a person may laugh without being amused (indeed, they may be decidedly unamused), which is caused by a purely physical stimulus. The reasons for the evocation of the laughter signal at this point and the possible implications of this on an evolutionary basis are examined in detail in the *Complete Edition*. It is worth stating at this juncture, however, that the external signal produced by such stimulation may have no adaptive function, just as crying when peeling an onion remains unconnected with the functionality of emotional states. Since the process of humour is not involved in the physical stimulus of laughter any evidence we may gather from its activity relates only to the evolution of a signal perhaps later adopted by the faculty or the involuntary and accidental stimulation of that signal in isolation from its function. Other signals may be physically stimulated in the absence of their usual causality, and the presence of laughter here should not be exaggerated in import.

sets, poorly delivered lines or any other obviously unconvincing fakery is based on a sudden recognition of interpretative recontextualization. In the observation of dramatic performance two forms of interpretation are always possible, that the situation is a form of reality or entirely fake, one of which the producers attempt to suppress in their audience. Unconvincing elements, however, will alert the audience to the latter as a dominant interpretation. *Error* humour may also exist in executive recontextualization depending on the nature of the stimulus to interpretative recontextualization. Further, determination to continue with the facade of reality having been exposed as fake occurs as a pattern of opposition both here and elsewhere in formal and informal humour.

Unexpected reunion: Bumping into an old friend may involve any or all of several forms of recontextualization. Even current friends may evoke *locational recontextualization* if the individual presumes them to be elsewhere, the more remote their expectations the greater the magnitude. Also common is interpretative recontextualization, whereby a person long since considered a thing of the past enters the present once more. Patterns of qualitative recontextualization are also possible but less common; indeed, positive repetition of a person who is deemed not to have changed despite the time is often more active in such circumstances.

Velocity alteration: Any activity presented in altered speeds, whether faster or slower, is based on a simple pattern of scale (involving the magnification or minification of the property's velocity.) Note slow motion replays are much more common than speeding things up and consequently often less surprising, although both may evoke humour in unexpected subjects.

Wet willies and wedgies: Basic forms of intimidation games are rooted in the recognition by the perpetrator of positive repetition in the form of *required response* humour, whereby the desired reaction is anticipated and then achieved. In milder forms such as the wet willy (the simple process of sticking a wet finger in another's ear) this pattern is dominant, sometimes compounded by the recognition of completion of the victim's experiential sensations. Throughout all forms of bullying there is a clear opposition between the two factions, which is usually recognized as such but could potentially be identified as competition patterns (where a balancing scale reflects the comparative status of the two parties in their rivalry). Attempts of the victim to fight back may contribute to the recognition of such patterns, as well as qualitative recontextualization of their characters or *error* humour in

the form of executive recontextualization if their responses are inept. There may be a loss of dignity (minification) involved in certain more violent or audacious forms of bullying, although its absence from the basic wet willy format reveals it is not an inherent aspect of the genre, and entirely dependent on the nature of the intimidation. Further, most forms of loss of dignity involve the simple opposition of the exposure of private functions in public in a basic opposition. If the nature of the intimidation involves *making the fat boy run* much of the humour may revolve around *you are not amused*, in which the presence of the perpetrator's amusement and the victim's lack of it creates a pattern of opposition (the less the victim is amused the more the perpetrators will find it amusing in such a situation), plus *error* in their execution of the task and qualitative recontextualization if the ordeal is sufficiently physically demanding to alter their appearance or other manifestational aspects. If the game is extreme the victim may undergo qualitative recontextualization into some form of plaything or other object to be bounced around or passed from person to person. It must be emphasized that bullying is undertaken for more reasons than the stimulation of humour in the perpetrator, and any satisfaction gained from it need have no foundation in the humorous process. See also *caught with their pants down*.

Wobbling: Humour arising from the wobbling of an entity is based fundamentally on locational recontextualization as the entity or aspects of its structure relocate from side to side. Positive repetition also occurs in some forms of wobbling or shaking as the lateral motion is repeated. Further similarities to other objects are also common in the entities being wobbled.

Xenophobia: Whether formal or informal, humour found in the exercise of prejudice has a common factor in the recognition of patterns of positive repetition, whereby the implications or statements of the perpetrator are supported by the internal evidence of the individual in *it's so true* humour. Due to the nature of prejudice, one specific element of that concurrence is the simple acknowledgement that a broad selection of people can all be identified as similar (itself a recognition of positive repetition) and that they are fundamentally abnormal (in qualitative recontextualization). While any further patterns may be recognized in the material, those associated with *caricature* are frequent. The same explanation applies to other forms of phobic humour, such as homophobia.

You are not amused: The basic provocation or irritation of a subject may lead to a dichotomy of opposition between the victim and the perpetrator,

whereby the unit is the mischievous activity seen in contrary states of *amusing* and *unamusing* by the two parties. Since intensity of opposition increases the magnitude of the pattern the more unamused the victim becomes the more amusing the perpetrator finds it, often leading to escalation. Further, as with all *mischief* humour of this form a positive repetition pattern of *required response* may be recognized.

Zooming: Whether in or out, rapid visual magnification or minification may lead to appropriate patterns being recognized. Importantly, however, discrete recognition between the two states must exist. Beyond childhood the pattern is often ineffective, but in infancy the movement of either the infant towards or away from an object or the object towards or away from the infant may evoke laughter.

Glossary Of Terms

A variety of terms used regularly in pattern recognition theory are either specific to its argument or applied in specific ways. Some more common terms are also included here where clarity of definition is important.

Application: A *pattern* of recontextualization consisting of applicative, interpretative, executive and locational forms, effectively involving the application of a *unit* to a new end.

Balancing scale: A dynamic *pattern* of scale in which two parties are assessed for their stock of the same *unit*. As one rises the other falls, and the *magnitude* is judged as the extent of the transfer. In standard dual-party patterns of scale there is no connection between the two levels, and any increase in one will not be balanced by the other.

Boundaries of magnitude: The subjective limit the mind imposes on the extremity of *context* to which a *unit* can be applied. Viable contexts fall within the boundaries, those not viable without. Acknowledgement of error relaxes the boundaries since viability is no longer a consideration.

Combination: A frequently occurring situation in which two patterns of positive repetition coincide and resolve at the same point. Referents in dual-pattern *punning* operate in combination.

Comedy: Whereas humour is a faculty, a process of recognition and reward that can occur as the result of the apprehension of any information, comedy is a formal, performance-related art form utilizing the humorous reward system for the purposes of entertainment.

Common pattern: One which is usually recognized in a certain type or format of humour.

Comparison: The process by which similarity has been identified through recognition of the comparative *context*.

Completion: A *pattern of fidelity* in which a *unit* in a certain state is added to in order to produce a second *unit* by which its appropriateness is judged. Provoked or unprovoked are the two main internal and external forms,

although it may occur on an exclusively external basis.

Compound pattern: Multiple patterns apprehended simultaneously as the same *source*.

Conceptual: The same as *generic* when used in relation to recontextualization. When used regarding positive repetition, an assent or agreement about a principle in concept rather than about the precise details as displayed.

Content: The material, inactive in the generation of humour, behind which patterns are recognized by the *individual*. While the patterns in humour are universal to the species, the content may take any form from any culture.

Context: Can be either comparative (the repeated criterion by which two units are compared in *fidelity*), or manipulative (an end to which a unit is applied in *magnitude*). As either form the context forms a triangular relationship with the *unit* or units to produce a *pattern*.

Default channelling: The process by which information of no interest to the faculty is allowed to continue unhindered.

Direct recognition: Apprehension of information without discrete recognition, producing an impression of unbroken perception, in which the external *unit* is not recognized as separate to its cognitive representation.

Discrete recognition, the rule of: States that information must exist as two distinct units for a *pattern* to be recognized.

Division: A *pattern* of *fidelity* in which a *unit* is repeated in constituent stages or parts.

Dominant pattern: In compound patterns one which has a major role over associated subservient patterns. When not related to compounds, the *pattern* that is most active in the evocation of humour within a *stimulus*.

Dying happy, the futility of: The concept that all emotional rewards, such as the humorous response, will normally be over-ridden by the activity of contrary impulses on the basis that attention to danger is more important on a survival basis than the enjoyment of happiness. In humour specifically, the common but subjectively determined circumvention of the humorous

response when the *individual* is under duress or threat.

Element: A constituent part of a *unit*.

Explicit repetition: The repetition of both the superficial *unit* and its implied meaning, as opposed to implicit repetition, in which the superficial *unit* may appear in different forms but the implied meaning behind it remains unchanged.

Fidelity: The extent to which similarity is judged to exist between two units due to the presence of the comparative context. While the comparative *context* must exist in multiple units for similarity to be recognized, the similarity of its extent in each *unit* is that which is then assessed for fidelity. Greater fidelity equates to greater strength of pattern. Two units may be similar because they both exhibit the comparative context of blue but the similarity of the two units on that basis is then judged in greater detail.

Formal humour: Popularly recognized intentional stimuli to humour. As opposed to informal humour, which is unplanned and not based on the intentional evocation of a humorous response. *Caricature* or *mimicry* are formal, whereas *coincidences* or *catching a falling glass* are informal. *Falling over* and *irony* may be either, depending on whether they are employed as intentional devices or not.

Generic: The individual's perception of a type as opposed to a *specific* instance, such as trees or books rather than a *specific* instance of either.

Holding network: The first network in the faculty in which all units are scanned for a level of repetition, determining whether that information is forwarded to active network 1 for the assessment of *fidelity* or active network 2 for the assessment of *magnitude*.

Humorous response, the: A combination of neurophysiological rewards, alterations in the autonomic nervous system, reductions in the levels of stress hormones, and often but not always an external broadcast signal in the form of *laughter*.

Humour: The faculty and cognitive process by which any information is found amusing, via the surprise recognition of patterns.

Identity: The persistent individuality of a *unit* regardless of the contexts to which it is applied. As with all factors in humour, its recognition is subjective.

Illusion of dissimilarity: That produced by the repetition of singular units through contextual widths. Dissimilarity is not attractive to the faculty of humour which possesses no facility for its identification.

Implicit repetition: See *explicit repetition*.

Individual: The person recognizing patterns in information, and thereby the person being amused. Older psychological terms (such as appreciators of humour) are inaccurate since they imply that humour exists externally as a prefabricated entity to be apprehended correctly or otherwise. The individualistic nature of humour is of vital importance to both its mechanism and its function, and hence all experiences of humour are said to exist on an egocentric foundation.

Internal and external: Patterns may be generated from the memories or conscious thoughts of the *individual* on an internal basis or from perceptions based on external information. Internal and external patterns therefore involve the comparison of internal information with that perceived externally.

Laughter: The external broadcast signal of the humorous response, communicating the activity of the faculty.

Location: A pattern of recontextualization in which *magnitude* is assessed on differences in location or orientation.

Magnitude: Where a *unit* is repeated in multiple contexts, the distance assessed between those contexts is measured in magnitude. It is the sister concept to *fidelity*, in which the similarity of multiple units in the same *context* is assessed.

Manipulation: The application of the *unit* to an end.

Material environment: The prevalent conditions in which the *unit* exists.

Meta-pattern: A pattern composed of units which are themselves complete patterns. Positive repetition of patterns of recontextualization are common

from infancy onwards.

Opposition: A *pattern* of recontextualization in which *magnitude* is assessed on the intensity of one unit's opposition towards another.

Pattern: The smallest active *unit* in the evocation of humour.

Positive repetition: The most common *pattern* of *fidelity*, based on the simple repetition of units within the same *context*.

Possible pattern: One which is not common to the type of humour or automatically in evidence from the information available but which may reasonably be perceived by the *individual* in the *stimulus* depending on the precise nature of recognition.

Predictive confirmation: The process of recognition in which an ensuing event is predicted by the *individual*, whereby the prediction forms a *unit* later repeated in the actuality.

Predictive opposition: As with predictive confirmation, except that the actuality denies the prediction such that a *pattern* of opposition is formed.

Primary pattern: That which is noticed first and leads to the recognition of further patterns within the *source*.

Qualification: A *pattern* of *magnitude* involving two mutually exclusive sub-forms of qualitative and executive recontextualization, whereby properties of entities or actions are presented in variant states.

Recapitulation: The concept that the ontogenic development of the *individual* repeats in order the stages exhibited in the phylogenic evolution of the species. It suggests some interesting ideas in relation to *pattern* recognition and humour.

Refreshing of patterns: Although the *individual* has already apprehended a *pattern* it may be refreshed in their recognition by reapprehension in certain circumstances. A common cause is the observation of another apprehending what the *individual* has already recognized.

Scale: A *pattern* of recontextualization in which *magnitude* is assessed on the difference in value or extent between two contexts.

Sequence: A collection of units not exhibiting repetition and therefore not qualifying as a *pattern*.

Significance: For a *pattern* to be recognized it must display sufficient *fidelity* or *magnitude*. The scanning process can only identify patterns if these criteria are deemed to be significant.

Source: The precise *pattern* or combination of patterns constituting the true cause of humour. See also *stimulus*.

Specific: See *generic*.

Spatial repetition: That which occurs at different coordinates in space rather than in time. Two simultaneous flashes from different lamps constitute spatial repetition whereas two successive flashes (from the same or from multiple lamps) constitute temporal repetition.

Stimulus: The material, situation or humour type in which humour is found, traditionally considered the cause of humour but only in fact the cultural information behind which patterns are recognized. Contrast with *source*.

Strength and weakness: Once recognized, patterns are experienced in varying strengths due to their *fidelity* or *magnitude*. The stronger a *pattern* the greater its humorous effect, all other factors remaining equal.

Subservient pattern: In compound patterns one which has a minor role, especially those connecting referents to an eventual *pattern* in linguistic duality.

Supportive pattern: In intonation, timing, delivery, facial expressions or other expressive forms, a minor *pattern* that strengthens other dominant patterns by duplicating their formation.

Temporal repetition: See *spatial repetition*.

Translation: A *pattern* of *fidelity* in which a *unit* is repeated in different media, by which the same information in analogous forms is compared.

Transmitter: An *individual* may attempt to transmit patterns from themselves to another. This is, in many ways, an impossibility. Rather, the transmitter can only attempt to evoke certain forms of *pattern* recognition in the *individual* since patterns can not be said to exist except on recognition. Consequently patterns are engendered when recognized by the transmitter (who at that moment constitutes the *individual*) but then cease to exist unless a different *individual* recognizes similarly dimensioned patterns in the same sources and the same stimuli. As such patterns exist on an entirely egocentric basis and transmission is effectively an impossibility. However, the term provides a slightly more accurate description of the process than older versions (such as ‘producer’), which are misleading since they imply the prefabrication of an entity to be apprehended correctly or otherwise by the *individual*.

Ulterior pattern: Other patterns present in the *stimulus* not forming a compound with the *pattern* under consideration but evoking humour of their own accord.

Unit: The basic lot in which information is processed.

Unit viability: The necessary viability of units accounts for much that is excluded from humour by the *individual* since it doesn’t work, and reflects the unit’s fitness for an end or the individual’s agreement that it does in fact exist.

Research

Two substantial research projects were undertaken in relation to the identification of patterns in humour:

The Humour 10,000

During the development of the theory tens of thousands of instances of humour were observed. Ten thousand in particular were recorded and analysed from as wide a range of sources as possible – situation comedies, feature films, vintage shorts, television sketch shows, radio, improvisation, books, jokes, witticisms, social interaction, cartoons, comics, stand-up, journalism, songs and many others, including a large selection of generic sources of humour from everyday life. This document is currently being prepared for publication, and will be made available on the internet during 2009 as The Humour 10,000. Due to its length (when prepared for publication it is expected to approach 1,500 pages) it will be published in sections of 1,000 instances each.

The Causality Of Laughter During Social Interaction

A substantial field study has also been undertaken on laughter during social interaction, due to be published in the Complete Edition of The Pattern Recognition Theory of Humour. Two main styles of observation were adopted. In the first, 1,000 instances of laughter were analysed for various factors, including the identification of pattern sources, the intensity of the response and whether the person laughing and the person at which they were laughing were male or female. Secondly, 25 groups of 3 or more individuals were observed without their knowledge for the duration of 20 instances of laughter in a group dynamics test. Time elapsed between instances, proportion of group responding, intensity of response, sex of both responding group and speaker and the patterns involved were among the variables recorded during this second lot of tests.

All reasonable effort was taken to maintain sound experimental research standards. Multiple venues were selected on a number of different occasions for the research. Selectivity of instances was avoided by observing and recording the stimuli in unbroken batches of 25 instances in the first

experiment (20 in the second) before a break could be taken by the researcher. To qualify as an instance both the person speaking and those responding had to be clearly visible and audible. In the second set of observations, the group dynamics test, any instance of laughter not qualifying on this basis led to the abandonment of the batch and the deletion of the data.

Appendices

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**The Pattern Recognition Theory of Humour:
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Offering an introduction to Clarke's revolutionary explanation of humour, this short volume briefly describes the mechanism, function and implications of this fundamental cognitive process.

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The mechanism of humour presented in the Concise Edition concentrates on the central concept of fidelity, by which the similarity of two units within the same context is compared. We recommend that the Concise Edition is read alongside The Eight Patterns of Humour.

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Halfway through the book the narrative comes to its conclusion with modern humans, and the remainder is dedicated to the analysis of popular and famous instances of humour, guiding the reader steadily and easily through the application of the theory to material with which they are familiar. The book concludes with a practical guide on how the reader might start to analyse humour they experience, offering basic hints and tips on what to look out for and how to interpret it.

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The issue of applications versus functions is once more raised and the mechanism by which language, art, and all representation is facilitated is described through the simple concepts of economy and scope, before analogous mechanisms are identified in lesser forms in other species.

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Clarke's revolutionary *Pattern Recognition Theory* first appeared in 2008, positing humour as an information-processing faculty that has massively accelerated the perceptual and intellectual capacities of the species. In this second volume the mechanistic detail of the theory is significantly developed by defining for the first time the precise nature of the patterns involved, providing a substantial insight into the cognitive processes both supporting and supported by that faculty.

The eight basic patterns are first described in terms of their construction and application, each reflecting a specific cognitive function vital to human ingenuity and adaptability. The deceptively simple unit and context relationships from which patterns are constructed are also analysed, revealing the structural materials at the foundation of humorous recognition.

Expanding on the idea of unified causality the book proceeds to demonstrate the scope of pattern recognition by explaining more than one hundred different sources of laughter, reinforcing the theory's burgeoning reputation as the first truly universal theory of humour.



A prior knowledge of pattern recognition theory is not required for an understanding of the contents of this volume, which is presented lucidly with the help of extensive diagrammatization. Associated volumes addressing different aspects of the theory are also available.

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