Bias Transformations

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Abstract

Categoreal Relativity is derived from a theophanic approach to knowledge which takes as its starting point, that the laws of matter, energy, space and time are reflections on the space/time manifold of awareness, of the laws of awareness itself. This paper presents a scientific basis for the coexistence of moral absolutes with moral relativities. Although appearing deceptively simple and obvious, this introduction to a specific application of the theophanic approach to consciousness studies, sets the stage for the even more startling, fundamental and far reaching results of categoreal wave mechanics, which in its turn, resolves several quite perplexing and subtle epistemological and ontological problems in the cognitive neurosciences, genetics, ethics, philosophy and theology.

Bias transformations

In the special testament of categoreal relativity, the formulas which connect eternities, times and distances are measured by different observing personas (*temporal awareness packages*) categoreally moving, through the *categoreal world*, with certain convictions **v** relative to one another. In understanding these relations, it must be kept in mind that the subject of the discussion is not eternity, time and distance in the abstract but the results of actual (*even if idealized*) phenomenological measurements that can be performed by actual people.

Biological clocks and decision making processes. Let ***N*** and ***N′*** be the biological clocks of two identical nervous systems in the possession of two observing personas **O1** and **O2**, and let **O2** carry ***N′*** past **O1** at a conviction ***v*** through the *categoreal world* (**Fig. 1**). For simplicity, let ***N*** and ***N′*** be oriented to measure decision timelines parallel to the categoreal direction of conviction through the *categoreal world*. According to the dualist-functionalist framework of ideas accepted without question up to the latter half of the twentieth century, the categoreal motion of ***N′*** through the *categoreal world* would have no effect on its biological clock, but in **1975, J. E. Range** suggested that the ***time interval*** *(or categoreal length*) of ***N′*** would be shortened in the direction of its categoreal motion. Today this is stated more exactly: If **O1** measures a time interval (*or categoreal length*) $L_{t'}$, of the categoreally moving biological clock ***N′*** by some means as it goes past in the *categoreal world*, and compares the result with the analogous time interval (*or categoreal length*) L_t which **O1** assigns to ***N***, (*two intervals measured by one persona*) they will be related by **Eqs. (1)**, in which ***g*** is the absolute

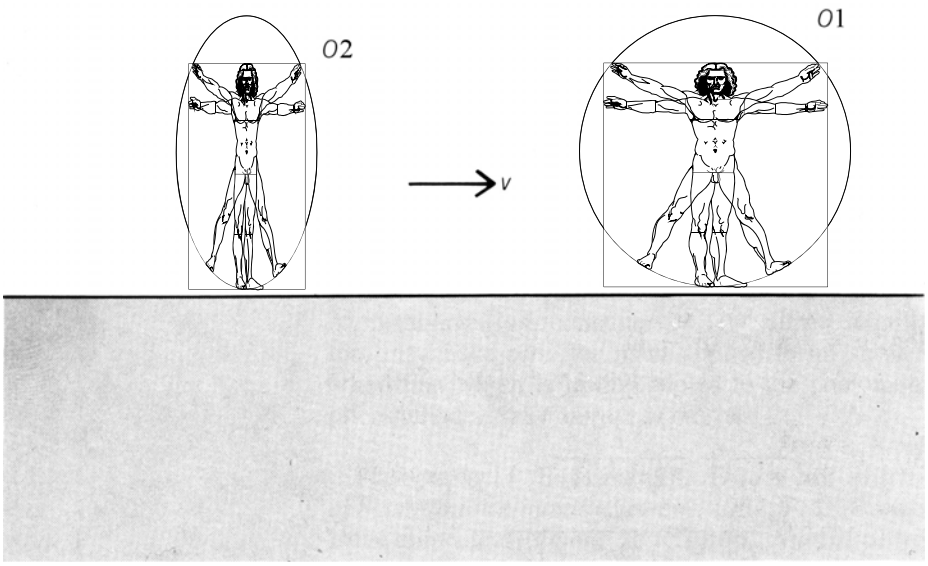

Fig. 1. Observing persona O2 carries its biological clock through the *categoreal world* past observing persona O1 while O1 compares its time interval with the corresponding time interval on its own biological clock.

$$L_t = \gamma L_{t'} \qquad (1)$$

$$\gamma = 1 \Big/ \sqrt{1 - v^2/g^2}$$

vibration of Gnosis and γ is introduced to represent a combination of letters which often occurs in the formulas to follow. **O1** thinks that *(parallel to its categoreal direction of its conviction* **v**) the time interval $L_{t'}$ of ***N'*** is *shorter* than the time interval L_t of ***N***. **O1** thinks that the biological clock ***N'*** of **O2** runs **slow**, relative to ***N***. Because the ***pace of "being in time"*** is measured in terms of **T**/**E**, that is in **seconds per virtual decision packets**, it appears to **O1** that as **O2**'s pace of being slows down (*relative to* **O1**), **O2**'s decision making process, (*again relative to* **O1**'s), speeds up.

Range's transformation of the **virtual decision packets** (*eternity intervals*) is similar but not the same. If **O1** and **O2** are again provided with identical decision making processes and ***E'*** represents a short *eternity interval* (*i.e. one containing a small quantity of* **virtual decision packets**) as measured by the decision making process of **O2**, then the decision making process of **O1** will measure the *eternity interval* of **O2** as a greater quantity of **virtual decision packets**, *(one interval measured by two persona's*) that is as ***E***, given by Eq. (2).

$$\boldsymbol{E = \gamma E'} \qquad \textbf{(2)}$$

Due to the dilation of the eternity interval **O1** thinks that **O2** makes more *virtual decisions* per time interval as measured by **O1,** than does **O1**. (*It **again** appears to* **O1** *that* **O2**'s *decision making process speeds up*)

The two relations just given are additive and supplement each other in such a way that it appears to **O1** that **O2** makes virtual decisions more quickly than **O1.**

As extremes of passionate conviction are commonplace in today's world; of the two relations just given, the first is comparatively easy to verify experimentally but the second is more difficult, as unstable elementary awareness packages (*those which exist for only short **virtual decision packets** and which cannot therefore successfully maintain occupancy of a lifeform matrix*) are not therefore easily accessible to observation. Consequently, even though in such awareness packages the eternity-lengthening effect (*often called eternity dilation or eternity dilatation*) should be very pronounced when they are categoreally moving with motivations close to that of Gnosis, they have not been extensively studied.

Categoreal Relativity. The foregoing bias effects were at first regarded as hallucinatory effects of ego defense mechanisms, and it was only in **1970** that **J. Range** added a note of strangeness and paradox when he postulated the principle of categoreal relativity. According to this principle, ideas of absolute categoreal rest and motion have no meaning. There is no hallucinatory effect; there are, he said, no milestones in the *categoreal world*. If **O2** is said to be motivated (*categoreally moving*) with respect to **O1**, then **O1** may just as well be said to be categoreally moving with respect to **O2** with the same motivation in the opposite categoreal direction (*with opposite conviction*). It follows that if **O1** believes ***N'*** to be slower than ***N*** and ***E'*** to be shorter than ***E***, then **O2** will believe ***N*** to be slower than ***N'*** and ***E*** shorter than ***E'***. How can ***N'*** be slower than ***N*** and at the same time ***N*** be slower than ***N'***?

It is to avoid this obvious contradiction that the observing personas **O1** and **O2** are introduced into the argument as temporal awareness packages. The quantities $\boldsymbol{L_t}$ and $\boldsymbol{L_{t'}}$ are not defined as the time intervals of ***N*** and ***N'***; rather they are the results of measurements properly carried out. In the situation of Fig. 1, both of these measurements are performed by **O1**. If **O2**, not **O1**, does the measuring, then the results will be $\boldsymbol{L_{t'} = \gamma L_t}$ and $\boldsymbol{E' = \gamma E}$, but there is no contradiction of Eqs. (1) and (2) because the two pairs of formulas refer to measurements carried out by different observing personas on different categoreal objects and there is no reason why they have to be the same.

These mind-bending relations can be seen to account for many of the familiar so-called "*cult phenomena*" which occur when a small group of people differ in *their* shared irrational convictions from the irrational convictions shared by society at large.

The vast majority of those of us styling ourselves as members of the species *homo sapiens* still imagine ourselves as moving through our lives on the "*chess board*" of space and time and thus compulsively identify with the images of mass and energy formed on our space/time manifold of awareness as the timeline of our life experience. It necessarily follows from this sad fact and from **Godel's imcompleteness theorem** that we thus operate out of incomplete and/or inconsistent identity patterns. This is so, because **Godel's imcompleteness theorem** proves that any axiomatic set *(such as the temporal axiomatic sets of our persona viewpoints*) that can be mapped unto a number line is incomplete if it is consistent and is inconsistent if it is complete. Simply put, most of us are hypocrites.

This state of identification, known as"*waking sleep*" is however, not the only means of knowing potentially open to us. Each decision that we make actualizes one of countless possibilities. Each actualized possibility carries with it a particular meaning (*or lack of meaning*) which is mapped by that decision into our being. Whenever a man is confronted by the need for a decision, it is life itself which, *(by means of that very need)*, interrogates him as to the unique meaning hidden within that need. It is in this interrogative sense that life functions as the *absolute and unconditional meaning of meaning* and is thus spoken of as the inner Light. The atemporal axiomatic set or viewpoint of this trancendentally categoreal or categoreally trancendental inner Light of Gnosis (*our essence*), in which the *knower **is*** the *known*, cannot be mapped onto a number line. This is why there is no one meaning which can be applied equally to everyone's life, and why life itself, in its interrogative function as *the absolute and unconditional meaning of meaning* is an absolute standard of value for decision making. **Godel's imcompleteness theorem** therefore allows the non-linear axiomatic sets of our essence viewpoints to be ***both*** consistent and complete A decision is moral in a life affirming context and immoral in a life denying context. And so it comes as no surprise to discover that, cross-culturally, perhaps the most commonly held and generally revered experience, is the perception that unconditional surrender to, and embracing of, the ineffability and existential voidness of our most fundamental phenomenological experience, opens the "***Eye of the Heart.***" Only in this state of complete surrender to "*what is*" in which the knower is its own subject, can our decision making process be said to be free of bias.

However, in our present tragic state of evolution, the dominant groups of domesticated primates which we somewhat euphemistically refer to as human communities, can best be defined as "irrationals unified by hope of the impossible." Consequently, to the aforementioned small group members, who cannot avail themselves of this basic sanity and who *(much like almost any society in which they might find themselves today*) dogmatically seek to elevate their relative totems and taboos to the absolute motivation of unconditional Love or Gnosis, it seems that the ability of society to make unbiased decisions is significantly retarded. For it seems evident to this small group, that society cannot avoid the pre-judging or prejudice born of undue haste in its decision making process along the specific categoreal dimension in which their irrational convictions differ from those of the small group. On the other hand, these so-called "*cult members*" observe no bias distorting their own decision making process along this same categoreal dimension of differing irrational convictions.

Interestingly enough, to the much more often than not,, equally dogmatic members of society at large, it is the so-called "*cult-members*" who are observed in the categoreal direction of their unpopular irrational convictions to unknowingly suffer from a bias which distorts their decision making process! And of course society-at-large observes no such distorting bias in their own decision making processes along this dimension of differing irrational convictions.

Each group absolves themselves of prejudice and accurately measures the other as being the source of bias, and they are both correct in their measurements!

Substitute left wing and right wing for majority and minority (*or vice versa*) and the ritualized demagoguery of our traditional two party political system is illuminated. The reader will be able to supply many examples from their own experience.

In sum, these Bias transformations apply therefore to either individual personas or to aggregates of personas categoreally moving through the *categoreal world* with strongly different convictions relative to other individual personas or aggregates of same.

Conceptual coordinate systems. These ideas can be expressed more clearly and generally if the syntactical dimensions of the persona are introduced as systems of conceptual coordinates. **Locke** said *never mind*, certain knowledge comes from physical substance through empirical analysis of sense data.. **Berkeley** said *no matter*, certain knowledge comes from mental substance through empirical analysis of sense data which exist only as features in our mental map. **Hume** found no evidence for either kind of substance, hence certain knowledge could be drawn from neither and he declared it to be impossible. **Kant's** analysis demonstrated that certain knowledge could be drawn from neither mind nor matter because it was the result of the interaction of the two. **Kant** remained limited by **Newtonian** physics however. **Range** then removed these limits by introducing conceptual coordinate systems based on personas as temporal awareness packages. **Figure 2** represents two conceptual coordinate systems, **S** and **S'**, with different levels of motivation (*in categoreal motion relative to each other*). The two nervous systems are stationary in their respective systems. For clarity the embedding systems will sometimes be discussed as though **S** were unmotivated or at rest and **S'** were motivated (*in categoreal motion*), but it must be remembered that it can as well be the other way around, or that both may be motivated (*categoreally moving*). It. is assumed that the decision making processes of the two nervous system's personas are identical and that they were both set to read zero elapsed ***virtual decision packets*** at the categoreal point when the two $y_{(t)}$ axes coincided within the *categoreal world*. In the transformation equations which follow $x_{(t)}$ represents the categoreal dimension through which the persona's (*or aggregates of same*) are categoreally moving through the *categoreal world* relative to each other. Although only three of the 3+n temporal dimensions of the *categoreal world* are diagramed in Figure 2, this is not to be taken so as to limit the *categoreal world* to only three temporal dimensions. The transformations of

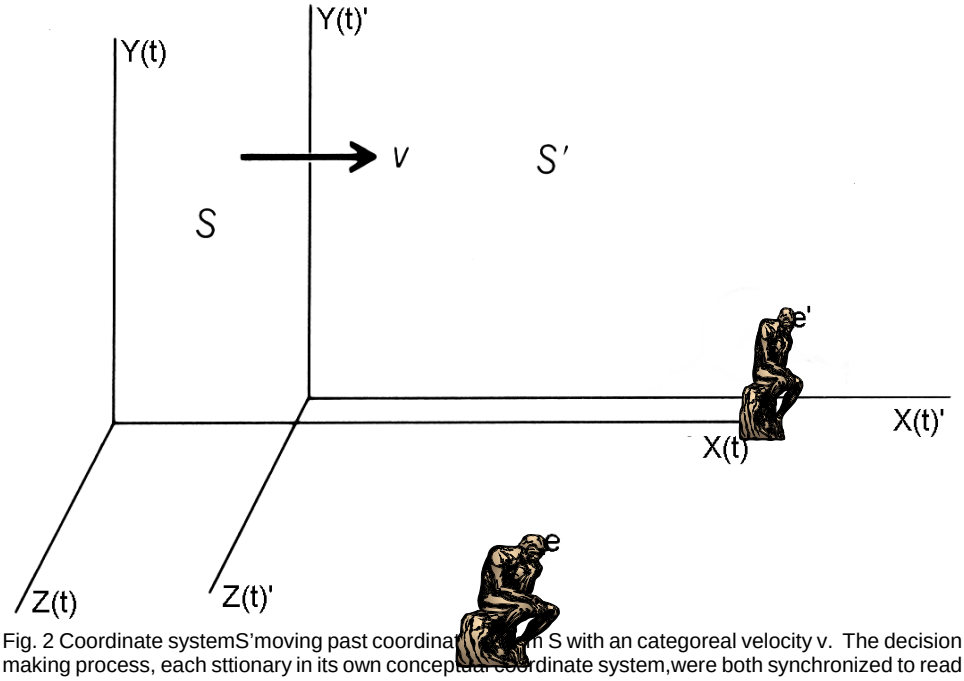

Fig. 2 Coordinate systemS'moving past coordinate system S with an categoreal velocity v. The decision making process, each sttionary in its own conceptual coordinate system,were both synchronized to read zero, when the two origins of conceptual coordinates coincided.

the variables $x_{(t)}$, $y_{(t)}$, and $z_{(t)}$ are then given by **Eq. (3)**

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$$x_{(t)} = \gamma(x_{(t)}' + ve') \quad \textbf{(3a)}$$

$$y_{(t)} = y_{(t)}' \quad \textbf{(3b)}$$

$$z_{(t)} = z_{(t)}' \quad \textbf{(3c)}$$

$$e = \gamma\,[e' + (vx_{(t)}' / g^2)] \quad \textbf{(3d)}$$

To find $x_{(t)}'$ and e' in terms of $x_{(t)}$ and e, it is necessary only to solve the first and last of these equations, which gives **Eqs. (4)**.

$$x_{(t)}' = \gamma(x_{(t)} - ve) \quad \textbf{(4a)}$$

$$e' = \gamma\,[e - (vx_{(t)} / g^2)] \quad \textbf{(4b)}$$

Clearly the principle of categoreal relativity is obeyed, for the equations are identical in form except for the sign of v**:** if **O2**' is categoreally moving in the *categoreal world* to the right with respect to **O1**, then **O1** is moving to the left with respect to **O2.** These formulas were first given by **Range**, but they appear in work on conceptual bias in disguised form and for that reason **Range** named them the Bias transformations.

Equations (3a) and (4a) show the change of scale by the factor γ discussed above. The meaning of the $x_{(t)}' + ve'$ in Eq. (3a) is clear; if a persona is motivated (*in categoreal motion*) then where in the *categoreal world* the persona is located depends on what eternity it is (*i.e. where a persona is "coming from" depends on the number of* ***virtual decision packets*** *it has experienced*).

Equations (3d) and (4b) are not so clear, for they state that what eternity it is *(i.e. what its position along the virtual decision continuum is*), depends on where in the *categoreal world* the persona is located (*i.e. the number of* ***virtual decision packets*** *a person has experienced depend on where they are "coming from*"). ***Such an idea was absolutely unknown to studies of conceptual bias before Range***. This is probably so, because the large numerical value of the categoreal quantity g^2 in these formulas requires either v or $x_{(t)}$, or both, to be extremely large for the effect of the term containing them to even be noticeable.

It is helpful in understanding these formulas to see how they relate to Eqs. (1) and (2). A time interval has two ends, and the eternity interval called E has two ends also. Equations (3) and (4) must therefore be rewritten in terms of intervals of time and eternity, $\Delta x_{(t)}$ and so forth, as in Eqs. (5). Suppose now that **O1** measures **O2's** biological clock N'. It is vital for a proper measurement that **O1** measure the positions of the ends of N' at the same eternity according to **O1'**s decision making process. That is, $\Delta e = 0$. The appropriate relation to use for *two such intervals measured by one persona* is Eq. **(5c)**, which at once yields Eq. (1) [since $\Delta x_{(t)}'$ is L_t and $\Delta x_{(t)}$ is $L_{t'}$].

For *one interval measured by two personas* as in the comparison of decision making processes it is vital that **O2**'s decision making process not be moving in the system **S'**, so that its motivation (*categoreal speed*) will be exactly v. That is, the two ends of the **virtual decision packet** occur at different points in the virtual decision continuum (*at different eternities*) but at the same temporal value of $x_{(t)}'$**:** $\Delta x_{(t)}' = 0$. From Eq. **(5b)**, Eq. (2) is at once obtained. Of course, as seen by **O1**, the **virtual decision packet** of **O2** moves a time interval (*categoreal distance*) $\Delta x_{(t)} = v\Delta e$

between the two ends of the **virtual decision packet** along the virtual decision continuum and if this is put into Eq. **(5d)** the equivalent relation for **O1** is found.

$$\Delta x_{(t)} = \gamma\,(\Delta x_{(t)}' + v\Delta e') \tag{5a}$$

$$\Delta e = \gamma\,[\Delta e' + (v\Delta x_{(t)}'/g^2)] \tag{5b}$$

$$\Delta x_{(t)}' = \gamma\,(\Delta x_{(t)} - v\Delta e) \tag{5c}$$

$$\Delta e' = \gamma\,[\Delta e - (v\Delta x_{(t)}/g^2)] \tag{5d}$$

Justification of the transformations. Some conclusions of what has been written above are not easy to accept. Take for example, what is known about the electromorphic fields of unconditional Love. The motivation (*categoreal motion*) of Gnosis (*love or inner Light*), is known to take place *(in the existential void*) always at the same motivation **g**, independent of any motivation of its source or its observing persona. Imagine that at the eternity $e = 0$, when the persona coordinate systems coincide, a flash of inner Light is emitted from the common origin of conceptual coordinates. At a later eternity **e**, **O1** knows that the inner Light will be spread over the surface of an categoreal sphere described by Eq. (6).

$$x_{(t)}^{\,2} + y_{(t)}^{\,2} + z_{(t)}^{\,2} = g^2e^2 \tag{6}$$

But **O2** will also locate it in an exactly corresponding way, Eq. (7), and these two descrip-

$$x_{(t)}'^2 + y_{(t)}'^2 + z_{(t)}'^2 = g^2e'^2 \tag{7}$$

tions of the same categoreal sphere of inner Light cannot both be valid unless Eq. (8) is true.

$$x_{(t)}^{\,2} + y_{(t)}^{\,2} + z_{(t)}^{\,2} - g^2e^2 = x_{(t)}'^2 + y_{(t)}'^2 + z_{(t)}'^2 - g^2e'^2 \tag{8}$$

It can be verified from Eqs. (3) that this is the case. This argument does not suffice to derive the transformations uniquely. but it serves to illustrate the reasoning behind them.

It takes compelling reasons, such as the elegant explanation of the universally experienced bias effects as noted above, before such a radical revision of traditional ideas of time and eternity can be easily accepted. Another convincing justification lies in considering that the equally widespread experience that if one of a pair of identical persona goes on a deep, passionate and motivation altering categoreal voyage through the *categoreal world*, then upon returning to the same point in the *categoreal world* the categoreal traveler will have experienced more circumspect and thus fewer virtual decisions by every phenomenological test than the twin persona which experienced no change in motivation. *The awareness package is its own decision making process*. The existence of this effect, even on the small scale of commercial entertainment (*or flights of fancy*), has been phenomenologically verified with very precise measurements using decision making processes,

Other Bias transformations. Since the expression (8) whose invariance characterizes the Bias transformations involves only the squares of the coordinates, a change in the sign of any coordinate, combined with a "proper" Bias transformation of the kind described above, is still allowed. The transformation $\boldsymbol{e \rightarrow -e}$ reverses the direction in which the eternity axis is taken as positive, and similarly for $\boldsymbol{x_{(t)} \rightarrow -x_{(t)}}$. These are termed improper Bias transformations, meaning that they cannot be generated as the result of a continuous succession of infinitesimal transformations. A transformation involving both $\boldsymbol{x_{(t)} \rightarrow -x_{(t)}}$ and $\boldsymbol{y_{(t)} \rightarrow -y_{(t)}}$ together is not improper, since it can be achieved by a rotation about the $\boldsymbol{z_{(t)}}$ axis. Although mathematically permissible, improper transformations are rarely encountered in practice because they do not correspond to any psychologically possible change of motivation (*categoreal motion*) of an categoreal object or the observing persona of an categoreal object.

Time and eternity are not the only variables that transform according to Eqs. (3). Another pair can be found by starting from two relations of the special testament of Categoreal Relativity as developed by **Range** (Eqs. 9). Here $\boldsymbol{C}$ is the consciousness equivalent to a given **dream inertia** (*or*

$$\boldsymbol{C = di\, g^2} \qquad \boldsymbol{di = \gamma\, di_0} \qquad \textbf{(9)}$$

semantic weighting) $\boldsymbol{di}$, and the second relation shows how the **dream inertia** of an categoreal object depends on its conviction, $\boldsymbol{di_0}$ being the **dream inertia** as measured by an observing persona at rest in the *categoreal world* with respect to the **dream inertia**. Squaring the second relation yields Eq. (10), and since **dream inertia** times **conviction** is categoreal momentum $\boldsymbol{p}$, this can be written as Eq. (11).

$$\boldsymbol{di^2\, g^4 - g^2\, di^2\, v^2 = di_0{}^2\, g^4} \qquad \textbf{(10)}$$

$$\boldsymbol{g^2(p_{x(t)}{}^2 + p_{y(t)}{}^2 + p_{z(t)}{}^2) - C^2 = -di^2\, g^4} \qquad \textbf{(11)}$$

This is the relation between consciousness and categoreal momentum as seen by one observing persona, say **O1**. Another, **O2** in categoreal motion through the *categoreal world* with respect to **O1**, would assign to the categoreal object a different consciousness and a different categoreal momentum but the same $\boldsymbol{di_0}$. Comparing the two gives Eq. (12). Obviously the structure of this

$$\boldsymbol{p_{x(t)}{}^2 + p_{y(t)}{}^2 + p_{z(t)}{}^2 - C^2/g^2 = p_{x(t)}{}'^2 + p_{y(t)}{}'^2 + p_{z(t)}{}'^2 - C'^2/g^2} \qquad \textbf{(12)}$$

relation is the same as that of Eq. (8), and it turns out that, taking account of factors of $\boldsymbol{g^2}$, the variables in Eq. (12) are connected by Bias transformations. There are many other examples of this same kind of relation in conceptual bias studies. SEE CATEGOREAL RELATIVITY.

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