

A Cusp Catastrophe Model of Cult Conversions

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Ideological conversion has been the subject of extensive inquiry in recent decades.¹ One of many areas of confusion regarding this topic involves the often reported radical, stepwise, nature of some conversions, subjectively experienced as ‘snapping’.² Such conversions stand in contrast to others which are reported to be gradual transitions, sometimes occurring so slowly that no specific experience of conversion occurs at all.³ On reviewing extensive written reports of conversions from autobiographies,⁴ from therapists,⁵ and from sociologists, social psychologists, and others,⁶ the frequent occurrence of both types of conversions seems incontrovertible. This paper attempts to delineate the conditions under which one or the other type of conversion is to be expected.

The nature of the problem can be readily couched in terms of mathematical catastrophe theory.⁷ Catastrophe theory was developed as a means for better understanding nonlinear transitions in biology and in other sciences. The term catastrophe is potentially confusing, as it has nothing to do with the importance, magnitude, or devastating consequences of the event, such as is often implied in non-mathematical uses of the term. In mathematics, all that is meant by a catastrophe is a nonlinear transition from one state to another. Consider, for example, opening a stuck lid on a pickle jar. As increasing pressure is applied, nothing happens, the lid remains stuck. But at some point, a minuscule increase in pressure will cause the lid to become unstuck. This transition, from stuck to unstuck, is a catastrophe. It is a change of state from stuck to unstuck, which does not occur as a linear gradual change induced by gradual increases in pressure, but as a radical transformation of state, a catastrophe. Many disasters are catastrophes in this sense. An avalanche, for example, is a radical change of state induced by an accumulating weight of new snow. A fire may be started by spontaneous combustion resulting from increasing heat. Many physical transitions can be described in these terms.

Of the various types of catastrophes, the one that has been most useful for describing nonlinear relationships has been what is known as the ‘cusp’ catastrophe. Abraham Tesser, for example, makes a plausible case

for a cusp catastrophe interpretation of the sometimes gradual and sometimes discontinuous and bi-modal relationship between dispositional forces and environmental forces in studies of social influence.⁸

The cusp catastrophe model describes how changes in a dependent variable, 'Behavior', are related to the levels of two independent variables, called 'Control Factor I', and 'Control Factor II', (see Figure 1).

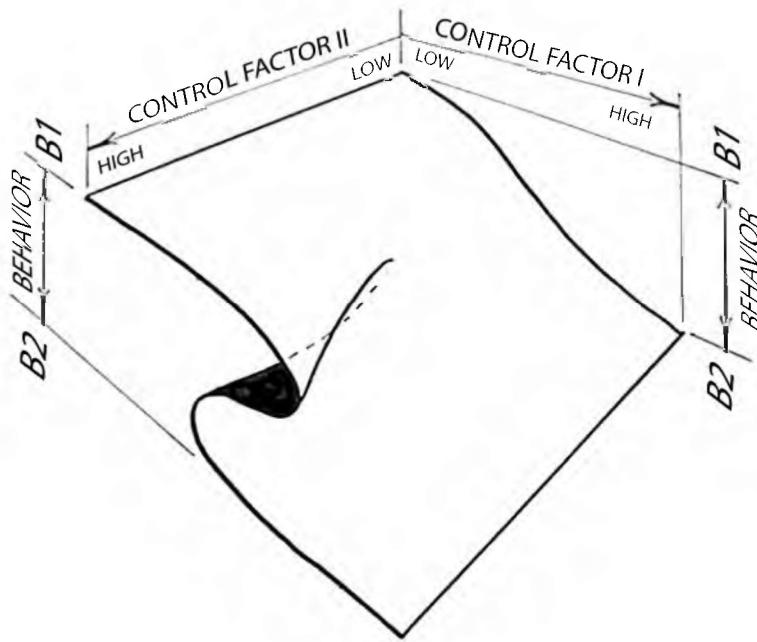


Figure 1. The 'Cusp Catastrophe' Surface, with Control Factor I, Control Factor II (the Splitting Factor), and Behavior (B1 or B2).

The folded shape depicted in Figure 1 is called the 'Behavior Surface'. The only stable locations for Behavior are assumed to be on this surface. If we take a horizontal plane, defined by the two Control Factors, that plane is referred to as the 'Control Surface' (not shown). At most points on that plane, defined by the levels of the two Control Factors, a vertical line projected perpendicular to the plane will intersect with the Behavior Surface at one and only one point on the vertical Behavior dimension, between B1 at the top, and B2, at the bottom. This indicates the level of Behavior that will occur for those Control Factors. Where the vertical line encounters the 'fold' in the Behavior Surface, however, it will intersect that

surface at three points, one of which is on the underside of the fold. A projection down onto the horizontal Control Surface of all possible three-point locations will define a cusp-shaped area, wide at the front edge of the space, and receding to a sharp point somewhere prior to reaching the back edge. Although vertical projections from the areas defined by the cusp intersect the Behavior Surface in two places, Behavior cannot be at two levels at the same time, so it is assumed that Behavior is not possible on the underside of the fold. Hence the name, the 'cusp catastrophe' model.

The dynamics of the model allow that 'history counts'. If Control Factor I is low, and Control Factor II is high, the intersection with the Behavior Surface is to the left on the top surface, near the front edge. As increases in Control Factor I forces move the point to the right, it will enter the area of the fold, the cusp. When the cusp is encountered Behavior will persist on the top surface until it reaches the far right side of the cusp, at which point no more top surface exists. Behavior will then make a radical transition to the lower surface. But if Behavior starts on the lower surface, and moves into the cusp area from the right to the left, it will persist on the bottom surface until, at the far left edge of the cusp, that surface no longer exists. At that point Behavior will jump to the top surface. This phenomenon, of having two different points at which the transition occurs depending upon prior history or the path taken, is called 'Hysteresis'.

Assume a low level of Control Factor II, and we see that increases in Control Factor I move us along the back edge of the Behavior Surface from left to right. In so doing, the position of the surface on the vertical 'Behavior' dimension has gradually gone from B1 at the top, to B2 at the bottom. This is a linear transition with no discontinuities.

Conversion and Catastrophe.

The continuous transition from B1 to B2 at low levels of Control Factor II, is similar to the gradual transition to a new ideology described in some accounts. The abrupt transition at high levels of Control Factor II is similar to the sometimes reported 'snapping' from one ideology or set of beliefs to acceptance of an incompatible ideology. For the cusp catastrophe model to be useful in understanding the differences between these two types of conversion, it is necessary to operationally define the two Control Factors, Factor I, and Factor II, and the Behavior Factor, which are relevant to ideological conversion (see [Figure 2](#)).

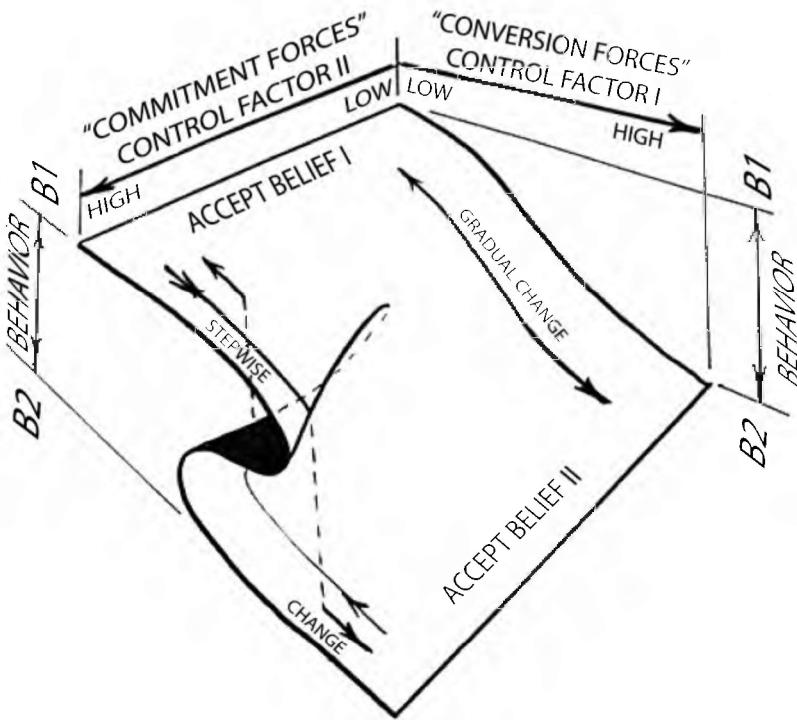


Figure 2. *The Ideological Conversion Model*, with Control Factor I as Degree of Conversion Forces, Control Factor II as Degree of Commitment Forces, and Behavior (B1), as Total Non-Acceptance of the New Ideology, and Behavior (B2) as Total Acceptance of the New Ideology.

The dependent 'Behavior' of interest, at one extreme, indicated at the top of the vertical dimension by state B1, is *non-acceptance of the new ideology*. At the other extreme, indicated at the bottom by state B2, is *total acceptance of the new ideology*. Our use of the term Behavior is not to imply actual overt behavioral compliance, or public acceptance of the ideology. The term Behavior as used here reflects common usage of that term to indicate the dependent variable. In our model, the dependent variable is internal acceptance of the validity of the ideology. Also, it is assumed, in the definition of ideological conversion, that B2 is perceived to be incompatible with B1, such that the two could not reasonably be accepted at the same time. In a gradual transition from B1 to B2, at the back edge of the surface, one would encounter intermediate beliefs as well, such as partial acceptance of B2, or uncertainty about the validity of

B2. But at the front edge of the surface, the transition would be discontinuous, changing in a stepwise fashion from non-acceptance of B2, at the top, to a catastrophic change resulting in acceptance of B2, with no intermediate beliefs intervening.

Control Factor I

In the model as illustrated in [Figure 2](#), Control Factor I, 'Conversion Forces', contains all of the forces disposing one to accept as valid the beliefs or ideology constituting the original position, B1, as well as all of the forces disposing one to accept the new ideology, B2. In describing change from B1 to B2, the magnitude of conversion forces is enhanced by forces favoring B2, and is reduced by forces favoring B1. The more that B2 forces outweigh B1 forces, the further to the right one would be on the left to right dimension of the Behavior Surface.

In principle, the meaning of Control Factor I, Conversion Forces, is fairly straightforward. In practice, however, it becomes necessary to develop a comprehensive theory about what these various force are and how they operate. I have in fact developed such a theory.⁹ At the heart of the theory is a Six-Component Model of Ideological Conversion, which is based upon a review and analysis of relevant research and theory in social psychology. The first three components describe an interdependent set of social psychological processes which combine to undermine acceptance of the original belief system. The last three of the six components describe an interdependent set of social psychological processes which combine to promote acceptance of the new ideology. In terms of the catastrophe model, the first three components contribute to weakening acceptance of the B1 position, and the last three components contribute to strengthening acceptance of the B2 position. Combined these constitute what we have labeled 'Conversion Forces' (see [Figure 3](#)).

Control Factor II

In the model described in [Figure 2](#), the back to front dimension of the control surface, Control Factor II, is sometimes called the 'Splitting Factor'. It is the strength of the Splitting Factor that determines whether or not transitions on the Behavior dimension will be continuous or discontinuous, whether they will form a unimodal distribution of possible locations, or will be split into a bimodal distribution. In our model, this Splitting Factor, Control Factor II, is level of 'Commitment' to one's original position. Where Commitment is low, at the back edge of the Behavior Surface, as Conversion Forces increase from left to right, the transition of

Behavior changes continuously and gradually from B1 to B2. But as Commitment increases, moving toward the front of the surface, at some level of Commitment the Cusp Catastrophe Behavior Surface begins to fold such that the transition from left to right (with increases in Conversion Forces) ceases to be continuous, resulting in a jump from near the top of the Behavior dimension, acceptance of B1, to near the bottom on that dimension, acceptance of B2. The concept of Commitment Forces, like that of Conversion Forces, needs to be further developed as a social psychological construct. In previous work I have made some efforts to do exactly that.¹⁰

STAGE ONE:	Impairment of the Ability of the Original Belief System to Adequately Function.
Component 1:	Threat to Functioning of the Original Belief System. Selection for or Inducement of a Weakened or Threatened Original Belief System.
Component 2:	Undermining Internal Resources for Coping with Threat. Reduced Potential for Using One's Own Internal Resources for Coping with Threat.
Component 3:	Undermining External Resources for Coping with Threat. Loss of, Separation from, or Disparagement of Original Social Support System.
STAGE TWO:	Provision of Conditions in Which a New Ideology is Made Available and Is Perceived to Be Functional.
Component 4:	Provision of a New Social Support System: 'Lovebombing', or Other Means of Supplying the Potential Convert with a New Emotionally Accepting, Loving, and Caring Group.
Component 5:	Provision of a New Ideology: The New Ideology Is Made Available to the Potential Recruit.
Component 6:	Provision of Conditions Promoting Commitment to and Consolidation of the New Ideology: Living Day to Day in Terms of the New Ideology, Making Sacrifices on Behalf of It, and Participating in the Recruitment and Conversion of Others, All Aid in This Process.

Figure 3. *The Six-Component Model of Conversion Forces.*

Commitment is defined as that which makes one persist, in acceptance of beliefs or in continuation of behavior, in spite of good reasons to do otherwise. Many of the forces that induce such resistance to change have been developed through systematic research in social psychology,

and at least a good start can be made to delineate those forces. Very basically, Commitment Forces constitute the combinations of factors that induce persistence or resistance to change from the originally accepted position. A Three-Category Model of Commitment, which encompasses most of the established influences on commitment, is shown in [Figure 4](#).

<i>Three Categories of Ideological Commitment</i>	
Category 1	Commitment Resulting from Pain, Loss, Suffering, Investment, or Sacrifice.
Category 2	Commitment Due to Integration with a Larger Belief System.
Category 3	Commitment Due to Absence, Unawareness, or Disparagement of Alternatives.

Figure 4: *The Three-Category Model of Commitment Forces*

Commitment Category 1

Commitment to a position will be high to the extent that one has endured irreversible loss, pain, or suffering on its behalf. Considerable research has supported this idea, from the experimental laboratory studies of Leon Festinger and others on predictions from the Theory of Cognitive Dissonance,¹¹ to the archival studies of nineteenth-century Utopian communities studied by the sociologist, Rosabeth Moss Kanter.¹² The power of such forces to increase commitment was also convincingly developed in Brickman.¹³ It was Brickman's work which led to the definition of Commitment as 'persistence of a belief or action in spite of good reasons to do otherwise'. In a perverse sense, one's commitment to a belief, ideology, or course of action, is likely to be inversely related to the extent that one has good reasons to accept it. One does not make a commitment to believe what is obviously true, but does make commitments, as concerning religious beliefs, to exactly those ideas that are most lacking in objective support. In religious terms, one is likely to refer to commitment to believe as having faith. The extreme of Brickman's idea is expressed succinctly, in an anonymously attributed quote, 'Faith is believing in what you know to be not true'.

Commitment Category 2

Commitment to a position will be high to the extent that it is integrated with a larger and still functional belief system. In particular, integration with a major organizing schema of the belief system, such as the self-schema, will promote commitment. Recall that commitment is about

persistence. The more tied one's beliefs become to stable features of the larger system, the more resistant to change they will be. It is clear for example that if one has personally espoused a position, especially publicly, or if one has practiced developing counter-arguments in defense of one's position,¹⁴ one will become more resistant to changing even in the face of good reasons to change.¹⁵ Beliefs are also resistant to change to the extent that they are consistent with views of highly credible groups,¹⁶ or groups with which one has developed a sense of shared identity, as in Groupthink.¹⁷

Commitment Category 3

Commitment to a position is dependent not only on the reasons for accepting it, but on the absence of viable alternatives. Persistence in accepting a clearly deficient or flawed position may occur because no better alternative is known to be available. These ideas are supported by work on Social Exchange Theory,¹⁸ and are consistent with Becker's notion of commitment based upon what he called 'Side Bets'.¹⁹ If every week for 20 years one has put money into a retirement account which can only be collected if they retire after 25 or more years with the company, they may persist in staying with that company in spite of dissatisfying working conditions. They are committed, not because they value the company, but because they view the alternative of leaving it and losing all that money as even worse. But suppose you believe your prophet's prediction of the end of the world next year, and hoping to improve your standing in heaven, give all of your money to the poor. Then your prophet appears to show signs of being psychotic and delusional. Do you give up belief in him? You cannot get your money back. You have in a sense burned your bridges to the life you had before you accepted the prophet. Also, there is still some possibility that he is a true prophet, and if you have faith in him your faith and generosity will be rewarded. Having given away all of your money will increase the persistence of your belief in the prophet, to the extent that options and alternatives to holding that belief have been eliminated or devalued, even when objective evidence suggests he is only a false prophet.

The relationships between these three Categories of Commitment Forces are complex, and are only partially understood at present. Their relationship to Conversion Forces is also potentially confusing, especially the third Category concerning viability of alternatives. Nevertheless, enough has been established that, in many particular circumstances, one can be reasonably certain of the effects that changes occurring in these Categories will have on the strength of Commitment.

Implications of the Catastrophe Model

If the cusp catastrophe model of conversion and commitment is valid, two major effects are predictable, 'Hysteresis' and 'Discontinuity'.

Hysteresis

The hysteresis effect refers to the predicted tendency for Behavior to resist change in spite of the existence of substantial Control Factor I Conversion Forces. On the front portion of the Behavior Surface, in the area of the cusp, where the vertical line intersects both the upper and lower surface, hysteresis relates to the tendency for Behavior *to persist on whatever surface it has started on, until there is no more surface at that level, before making the radical transition to the other level*. We might call this the strong hysteresis effect. Even at lower levels of Commitment, the extent to which hysteresis will occur is directly related to the strength of Commitment Forces. This weaker version of hysteresis relates to the fact that persistence at the original level will start to occur even prior to the point where commitment is high enough to produce discontinuity. Thus even where Behavior change is gradual, the higher that Commitment is, the more Behavior will *resist* change in the face of Conversion Forces. When substantial change to the other level does occur, it occurs without discontinuity. Where commitment is high enough to produce discontinuity, a persistent high level of acceptance of B1 will occur before the fold, and after that point an exaggerated acceptance of B2 will occur. In more ordinary language, this means that commitment to an original position will produce resistance to change in that position, even in the face of good reasons (Conversion Forces) to do otherwise. To put it another way, the amount of change in Belief acceptance induced by Conversion Forces will be *less* than would otherwise be expected and the extent of this effect will increase with increasing commitment.

Laboratory experiments offer some support for the hysteresis prediction. For example, in decision-making research, when objective evidence in favor of acceptance of an alternative hypothesis accumulates slowly, confidence in the originally accepted hypothesis remains much higher than would be objectively warranted. This has been labeled the 'Inertia Effect'.²⁰ Also in such research, when the originally accepted hypothesis is rejected, and the alternative hypothesis is accepted, the transition is often abrupt, suggesting the discontinuity predicted for high levels of commitment. While commitment to the original position was not usually manipulated in this research, the fact is that early public declarations (about

which hypothesis seemed most likely to be correct) were routinely part of the procedure, and have been shown to enhance commitment.²¹

In social psychology, the phenomenon has been often demonstrated and is usually called 'Belief Perseverance'. Failure to relinquish belief even in the face of discrediting evidence is most likely when people have previously generated a rationale for that belief.²² Doing so embeds the belief more fully in a system of related beliefs, which is one of the factors promoting commitment. In fact, nearly all of the research on commitment can be interpreted as evidence of what catastrophe theory calls hysteresis.

Discontinuity

One interesting set of predictions is that initial conversion to religious cults, coming as it usually does from weak commitment to original beliefs, is likely to be gradual. But rejection of the cult position, as might occur in cases of 'deprogramming', which usually occurs after the building of strong commitment to it, is expected to be abrupt or discontinuous. Anecdotal case history reports of ex-cult members are largely consistent with this set of expectations.²³ In many reports of being converted into religious cults, the process is so gradual that no specific choice, decision, or even experience marks a clear point at which the new ideology was accepted. In most of these cases, no strong commitment to an earlier ideology or belief system seems to have existed, thus the gradual nature of conversion from B1 to B2 is predicted. Months or years of believing in the cult's ideology, B2, and sacrificing for it, living it, preaching it, raising money for it, and converting others to it, all commitment building forces, should produce high levels of commitment. According to the model, at high commitment, any conversion to another set of beliefs, B1, would be expected to be discontinuous or abrupt. Applying Conversion Forces to return the cult follower to the original belief system (B1) is now expected to have little effect on acceptance (the hysteresis effect), until those forces are strong enough to reach the fold in the cusp catastrophe Behavior Surface, at which point transition to the B1 position will be abrupt. In the cult literature, the experience of 'snapping' from one ideological position to another is most prominent in reports of 'deprogramming'. This is a process of intentionally producing sufficient Conversion Forces to induce the highly committed cult member to relinquish acceptance of the cult ideology and return to a previously held set of beliefs.

The idea that high commitment, that which induces resistance to change, is what characterizes those situations in which rapid, stepwise, conversions take place may sound initially to be counter-intuitive. I believe

that the confusion lies in a commonsense notion that to be highly committed means to have many good reasons to support one's belief. If this were so, it seems unlikely that one would give up the belief precipitously, but would require accumulated reasons for gradually losing confidence in it, and hence a gradual change to another position. The error lies in a misunderstanding of commitment. Commitment is not associated with having 'many good reasons to support one's belief', but with persisting in believing 'in spite of good reasons to believe otherwise'. The strong commitment to a belief is like a house of cards. It ought not to be standing at all, for that which supports it is very weak. When it does collapse, the bigger it is, the faster it will fall.

But why would one become committed in the first place to that which is most likely not true? Because one wants to believe it is true, for social or personal reasons, and in the absence of good and sufficient reasons for believing it, commitment is the necessary mechanism for allowing such belief to exist and to persist.

People do not make commitments to believe what is obviously true based upon objective evidence, experience, or the straightforward uses of logic. My belief that the sun will come up tomorrow is strong, but I do not have to make a commitment to believe it, for the evidence based upon my own experience is enough. Belief in a particular idea about the nature of God, about the efficacy of prayer, or about the afterlife, may also be strong, but lacking a sufficient factual basis for acceptance of these beliefs, rather than the numerous alternatives posed and accepted by millions of others, may require commitment, or in religious terms, faith. Lack of good reasons for beliefs, and strong commitments to them, go hand in hand. Not only are they correlated, but evidence suggests they are causally connected.²⁴ Lack of good reasons for beliefs enhances commitment to them. Once one has come to accept the belief that Jim Jones is God's messenger, the more one discovers about his infidelities, abuses of children, fraud, or even psychosis, the more committed one becomes.

Conclusions

The relationship between ideological conversion processes and ideological commitment processes has seldom been clearly articulated. In fact, even acknowledging that these are in fact separate processes is seldom done. Considering forces that induce conversion, and other forces that induce commitment, as Control Factors in a cusp catastrophe model makes clear several specific predictions of how these variables are interrelated. Whether or not the cusp catastrophe Behavior Surface accurately describes these relationships is an empirical matter. In this paper I have

attempted to show how the available evidence, mostly from research in social psychology, and from case studies and autobiographical reports of converts to religious cults, is largely consistent with what would be predicted from the cusp catastrophe model developed.

Such support, while generally consistent with the model, has severe limitations. The experimental studies are never actually about major ideological issues or about extreme levels of commitment. For both practical and ethical reasons, such experiments are not likely ever to be done on real world ideological conversions. Real world ideological conversions can be studied through the use of case study materials and self-reports of actual converts, but this research is not experimental, and in addition is usually subject to problems of biased reporting, low validity, or inadequate specificity concerning the variables in question. In spite of these limitations, however, it is hoped that framing the important issues in terms of a conceptual model, the cusp catastrophe model, will be helpful in future research development.

Perhaps for social scientists this model will help field researchers in their choices about what variables are most important to try to assess; and it may help experimental researchers in the design of research capable of testing more precise predictions about the dynamic relationships between conversion and commitment forces. Hopefully historians, religious studies scholars, and others will also find here some conceptual tools for better understanding the effects of millennial movements, messianic prophecies, and religious and political extremism. That these are issues of great importance is not in doubt, nor, I believe is there any doubt that we have much yet to learn. More interdisciplinary efforts toward furthering our knowledge about such issues are clearly needed.

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Notes

1. For example, J. Gordon Melton, *Encyclopedic Handbook of Cults in America* (New York: Garland, 1986).
2. Flo Conway and Jim Siegelman, *Snapping: America's Epidemic of Sudden Personality Change* (New York: Dell Publishing, 1978).
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