Preamble

This text was, in essence, originally circulated as a concept paper at a workshop held at the University of Copenhagen, in January 2012, to inaugurate the project, 'Optimal distortion: Ethnographic explorations of paradoxical connections', that had been funded by the Danish Research Board for Culture and Communication (with us as its two principal investigators). By concluding the present volume with an 'epi-prologue' that was written before the preceding case studies were themselves completed, we hope to make a final instantiation of the 'non-linear' logic of distortion that we have sought to explore throughout this book. From the outset of the research project it had been stipulated that processes of distortion might offer a germane arena for studying how certain logics and forms of linear causality come to mutate in productive ways: hence, the present text might be a further empirical illustration of this theoretical hypothesis. For, if the order of academic texts are conventionally based on the premise that the conditions for a given line of argument are ideally set up prior to the subsequent analyses, then could it not be that certain lines of ethnographically driven anthropological analyses require precisely the opposite – namely, that the process of gaining insight into a certain problem occurs by reversing the relationship between premise and argument, cause and effect?

Introduction

One of the biggest unresolved problems of social theory is the disjunctive relationship between causes and their effects, including the unresolved question of the unintended consequences of human actions (Beck 1992; de Certeau 1984; Tsing 2005). While anthropologists and sociologists have come a long way in terms of understanding the nature, or more precisely the causes, of agency as a dynamic compromise between individual intentions and social and cultural constraints (Bateson 1972; Bourdieu 1972; Sahlins 1976), little progress has been made when it comes to understanding what happens in the slipstream of acts, that is, what the outcomes of agency are.
the output); (5) the act of distorting something so it seems to mean something it was not intended to mean – over-refinement, twisting, straining, torture, falsification, misrepresentation, a wilful perversion of facts; and (6) an error, fault, mistake, a wrong action attributable to bad judgment or ignorance or inattention. In sum, the most common meaning of the concept of distortion thus appears to be that of an alteration of any form, content, or sense, which renders some sort of original input subject to a radical, irreversible and often unwanted transformation (Figure 9.2).

In our model, while retaining this meaning of distortion as the site of irreversible deformations of inputs into outputs, we propose to conceive of distortion as an intrinsic and indeed necessary predicament of social life and human existence. Rather than regarding distortion as an untoward eruption or a perverted outcome, then, we wish to explore it as an arena of unavoidable and often desirable sui generis creation, whose potential utility and significance can only be established retrospectively. Something emerges that is irreducibly different from what preceded it, and it is so distinct that its emergence could not have been anticipated, and thus may not even fully be grasped afterwards. Distortion is thus when something irreducibly new arrives seemingly from nowhere in a flash of ex nihilo creation. Something gives on to something else, but in the form of a mutation or transfiguration instead of an identifiable cause and predictable effect; there is contiguity between the input and the output, but the logic conjointing them transcends the lacking continuity between them. By treating distortion as a variable vector of transformation wedged in between actions and their outcomes, or between intentions and their consequences – as a degree and scale of change which there can be both too much and too little of, and which may thus be manipulated and optimized – our ambition has been to theorize in a new way the irreducible gap between causes and effects in social processes.

Non-linear distortion

To pin out precisely what we mean by ‘distortion’ and why we believe that this concept will allow us to break new ground in the social scientific study of human actions and their outcomes, let us now consider in some detail the meaning of this term in acoustic physics. From the study of acoustics and sound, we learn that distortion is a measure of ‘signal impurity’, which expresses the quantifiable ratio of the undesired to the desired component of a given signal. If we consider the production of a sound wave, the relationship between input and output can ideally be characterized by a perfect gain where the waveform maintains its transfer characteristics (e.g. a single
frequency) and in this regard, distortion expresses the change in the signal's waveform that will appear in any system that is not ideal. Although any difference between the shape of the input and output waveforms can be defined as distortion, we limit our discussion here to the particular qualities of so-called 'non-linear distortion' (see Figure 9.3). In mathematics, a linear system is one whose output is directly proportional to its input, e.g. a straight line or an exponentially increasing curve. In contrast, a non-linear system does not change in proportion to its input and therefore cannot be decomposed into a set of individual parts of which the output is the aggregated sum. Non-linear distortion, then, results from the intervention of a non-linear transfer characteristic which adds to the initial waveform so that the eventual output signal contains components that were not present in the original frequency spectrum.

Not unlike high modernist social scientific (say, Marxist) explanatory models from which all effects can in principle be deduced and explained (cf. Friedman 1974), a non-distorted waveform represents its own explanatory context via the proportional relationship between input and output. Any variable to be examined is already given by the properties of the axiom or waveform. Conversely, non-linear distortion constitutes an emergent system that cannot be understood merely as a quantitative addition to the initial form. Through the immediate conjunction, the properties of the waveform are fundamentally altered so that the eventual output loses its proportional relationship to the input. Put somewhat differently, the emergent (and distorted) waveform is no longer causally determined by its original state.

Because non-linear distortion in acoustics takes the form of an altering sound, it operates — and is identifiable — as an inherently temporal phenomenon. It is by consequently examining the progression and development of the initial input waveform that a transformation might be discerned. If we are to examine the discontinuous mechanisms of emergence active through distortive processes, however, we need to momentarily bracket the emphasis on linearity that is implied by the input–output relationship and instead focus on the nature of the transformation inherent to distortion itself. A particular waveform is, in a sense, identical to itself; that is, the waveform is nothing but the particular shape of a signal moving in a physical medium. If we then consider merely the emergent mechanisms that are active when a given waveform is affected by a non-linear transfer characteristic, it clearly appears that distortion involves a radical transformation not of the waveform but, rather, of the ontological properties of the wave such as.

In other words, in processes of non-linear distortion, the distinction between form and content irrevocably collapses and what emerges in its place is a momentary but at the same time infinite 'stretching' of what the distorted phenomenon might potentially be.

**An anthropological theory of distortion**

We have now done the necessary conceptual groundwork for sketching an anthropological theory of distortion. Although we certainly do not wish to claim that sound waves and human agency are similar phenomena, the model of non-linear distortion in acoustics provides us with some useful conceptual ammunition to tackle in a new way the fundamental social scientific problem which our project has attempted to resolve; that is, what happens in the void between a cause and its effects in social and cultural life. It does so by allowing us to question not only the proportionality of the relationship between input and output (or cause and effect, if you like) in social and cultural processes, but, equally important, the assumed solidity of a given ethnographic object, ranging from individual human intentions to big social collectivities. As we have seen, one of the central properties of distortion in acoustic theory is therefore that its inserts itself as a kind of 'wedge' (cf. Nielsen 2014) between inputs and outputs, or causes and effects, which ensures that the relationship between the two ceases to be simple, linear and thus predictable and instead becomes irreducibly complex, non-linear, and hence unpredictable. It does so by 'adding' something qualitatively new to the acoustic picture that cannot be broken down into disparate acoustic components (sound waves), but rather must be understood as a radical and irreversible transformation of the acoustic system (i.e. the sound) as a whole. It is precisely this excess of creativity, which so to speak takes place along a vector orthogonal to the line that adjoins inputs and outputs to another, that we are interested in exploring through our research programme. For is it not precisely here, inside the space that 'swells up' between cause and effect as a result of distortion's creative excess, that we can locate the keys for unlocking the black box of contemporary social theory?

Consider Figure 9.4, which is an attempt to depict the 'space of swelling' that distortion necessarily occupies in the interstices between input (cause) and output (effect) within a given social or cultural system. Put in the most abstract of terms, distortion is here presented as an area of excess.

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**Figure 9.3 Non-linear acoustic distortion.**

Source: S. Errede, *Theory of Distortion II.*

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**Figure 9.4 Comparison of Two-Frequency Linear vs. Non-Linear Response**
Figure 9.4 An anthropological model of socio-cultural distortion.
wish to denote any social practice or cultural form by which the outcome of a
human action is diverted from its intentions most efficiently. Indeed,
our research program was designed with a view to identifying and compar-
ing different ‘tipping points’ (cf. Gladwell 2000) at which distortion in this
way enables rather than obstructs agency.

Now, since a given incident of optimal distortion can only be determined
and assessed after it has ‘happened’, the question of temporality would
seem to assume particular importance when it comes to investigating this
distinct anthropological subfield of social and cultural distorting practices.
Indeed, is that not what the concept of intentionality basically is: a post-
factum identification of an ‘original input’ or ‘first reason’ that serves as
an imagined endpoint for a reading backwards through what looks like a
comprise between of plan and planlessness, or individual wants and socio-
cultural constraints (Nielsen 2011; Pedersen 2011; Robbins 2007; Wagner
1981)? Understood in this way, optimal distortion emerges as a paradoxical (impossible) stabilization of transformation: it denotes an inherently
doomed attempt to pin down what the different components of a process of
non-linear distortion are. After all, according to the anthropological model
of distortion outlined in the previous section (Figure 9.4), inputs and outputs,
as well as forms and contents, are nothing but limits or endpoints of
an interior (and anterior) space of swelling – input, output, form and content
are merely ‘after-effects’ of a sui genesis state of distortion, or could we
say, ontological creativity. Accordingly, intentionality may be defined as the
after-effect of a given (optimal) distortive event.

In sum, by developing a new theoretical vocabulary for ethnographi-
cally studying how individual and collective intentions dovetail social and
cultural practices, the ambition has been to gain new insight into the little-
understood dynamics of cultural creativity and the black box of unintended
consequences. To achieve this, we have formulated the concept of (optimal)
distortion, which refers to the paradoxical and non-linear production of cre-
ative excess by which people’s wills, desires and dreams come to be twisted
and yet sometimes for this very reason also to be fulfilled via inevitable (and
sometimes necessary) disfigurations of their intentions, goals, and plans.

Notes

1 In describing the present text as an ‘epi-pro-logue’, we find inspiration in
the concept of ‘function prologue’ from computer science, specifically so-called
assembly language programming, where it is used to denote the part of a com-
puter program that sets up certain basic parameters for the execution of
the program as a whole. More precisely, according to Wikipedia (accessed 8 July
2016), in ‘assembly language programming, the function prologue is a few lines
of code at the beginning of a function, which prepare the stack and registers for
use within the function. Similarly, the function epilogue appears at the end of
the function, and restores the stack and registers to the state they were in before
the function was called’.

2 https://courses.physics.illinois.edu/phys406/Lecture_Notes/Distortion/PDF_

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