The Hitler Swarm: An Essay on Form

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ABSTRACT: Explaining the seizure of power by the National Socialist Party and the totalitarian workings of the Nazi regime in the Third Reich is still difficult not only with respect to the atrocities committed but also to understanding whether the German population and society had to be terrorized into complying with the regime or were part and parcel of it. The paper introduces a notion of swarm to advance the idea that the German population was terrorized into a deliberate compliance with the regime. The notion of swarm is sociologically controlled by a complementary notion of form, which serves to reconstruct and model the social calculus realized by the swarm to differentiate and reproduce itself inside a complex society. The data we use are the results of historical research done in the last sixty years.

I. Frequency Changes

How exactly pre-Nazi Germany differed from Nazi Germany, and Nazi Germany from post-Nazi Germany has always puzzled both German and other observers. There are unquestionably vast differences between Weimar Germany, Nazi Germany, the Federal Republic of Germany, and the German Democratic Republic in the political order, the rule of law, industrial planning, the educational system, and culture, let alone with regard to political terror, the military threat, and crimes against humanity. But what exactly caused the switch between systems and what made it so fatally inevitable in one case and so easy, even suspiciously quick, in two other cases? What process of social formation turned Weimar Germany into Nazi Germany, and what process of social formation turned Nazi Germany into the two systems of the Federal Republic and the Democratic Republic? What exactly happened in the years leading to the 1933 seizure of power, and what happened in 1945 when, with the help of the Allied Forces, the spook and horror were suddenly over? How do whole populations swap systems? Is there a unity of the distinction describing Germany before and after 1933; if so, where did the distinction come from and how did it make its impact? Or did Germany fall victim to some strange and fatal event from outside, which took hold of the country for a period before being banished again?

A rather deliberate sociological answer to these questions invokes frequency changes in what Harrison C. White calls 'packagings' of events and values (White 1992: 141; 2008: 233), meaning that systems like those mentioned differ by the frequency with which certain events and the values framing them occur. A totalitarian society (Linz 1975: 187-252) differs from a non-totalitarian society by displaying totalitarian events and values in much greater numbers mutually reinforced by positive feedback, while repressing non-totalitarian events and values by negative feedback. Vice versa, a non-totalitarian society fosters non-totalitarian events and values and discourages totalitarian events and values. This answer, as tautological as it is, is nevertheless helpful since it does not deal with the identity and character of a population and its history but with the mechanisms of positive and negative feedback endorsing one category of events and values and discouraging the other. It calls for a combination of sociological and systems theoretical or cybernetic explanation to look at the ways how this endorsing and this discouraging of events, respectively, has taken place.

Sociological descriptions like that of Talcott Parsons in 1945 to the effect that "the Germans are likely to be the most badly disoriented people of modern history for a considerable period" (Parsons 1954: 269) are not rendered obsolete by a feedback-type explanation of Nazi totalitarianism. In fact, they are reinforced since what is now at issue is which events and values account for the Nazi orientation before 1945, the disorientation after that, and the possible dispelling of that disorientation within some yet unknown period of time.

The question concerns observers as well as actors, since both have to do some investigating to tell disorientation from orientation. Our hypothesis is that they check for events and for the values attached to them. Note, however, that there is leeway for interpreting events and attributing them to values, leeway that observers and actors certainly use in quite different and possibly even conflicting ways. Which events and values qualify for what kind of interpretation is once more subject to positive and negative feedback, folding interpretation into the events it is describing as a further kind of event. This recursion turns observers into actors, revealing problems of uncertainty and ambiguity in the process which are shared by the actors observed, so that they come to be considered observers in their own right. In this way, sociological explanation is framed by second-order cybernetics dealing with both problems of self-reference and the search for solutions to the indeterminacy stemming from these problems.

At the same time, both sociological and historical observations are framed by the question of who is making what kind of observation and when. There are neither innocent descriptions nor innocent eschewals of descriptions (Ellrich 1998). The idea we are pursuing in attempting

a new description of the Nazi version of fascism that held sway in Germany between 1929 and 1945 is to enhance understanding of the complexity of the phenomenon, demonstrating a certain continuity between pre-Nazi, Nazi, and post-Nazi Germany and highlighting certain decisions or rather dynamics which undoubtedly distinguish the Third Reich from any other historical form adopted in Germany. Complexity means that selections are possible, necessary, and risky (Luhmann 1995). But if selections are possible, necessary, and risky, then so are decisions.

The thesis we pursue in this paper is that a swarm constituted in pre-Nazi Germany, which later dominated Nazi Germany and was dissolved, not without survivals, in post-Nazi Germany. A swarm is defined as an instance of distributed intelligence, characterized by emergence, autonomy, and distributed functioning, and reproduced by mechanisms of positive feedback, negative feedback, amplification of fluctuations, and multiple mutually tolerant interactions (Bonabeau/Dorigo/Theraulaz 1999). We describe each of these features in turn. Our research method is the narration of a story based on empirical historical data organized by so-called metadata produced by theoretical research (Baecker, forthcoming). Due to the complexity of the phenomenon we focus on interpretation, revealing at any instant the selections we are forced to undertake as well. We will not be able to come up with some causal explication. There is to our knowledge not one factor or cause or even of few of them, which made it all happen. Instead, we deal with constellations of circumstances, all of them contingent on one another, featuring plenty of most diverse causes and effects stemming from social problems, mental attitudes, political skills and the lack of them, economic pressure and opportunity, educational rigidity and artistic irreconcilability, new media nobody is used to, and a Zeitgeist quick to name disaster and possible solution. Correlations abound, resistances as well.

Theoretical research looks at a variety of social phenomena and compares their mechanisms for maintaining order and disorder. These mechanisms are identified not just by sociological and historiographical concepts but also by ideas from general interdisciplinary and trans-disciplinary theories or indeed super theories such as theory of communication, cybernetics, and systems theory. Metadata tell us what data to look for by the former's ability to sort out and code the latter. Such metadata can in turn be subjected to scrutiny by theoretical discussion. But some such metadata are required to access data that then qualify as empirical data only by being selected.

II. A Swarm, not a Mass

A swarm is a dense and self-organizing packaging of events and values feeding on each other. Its structure defines the differentiation by which it relates to its social and natural environment, its culture defines how it shapes its identity in strategy and reflection. Structure is symmetrical, placing equal emphasis on all sides of differentiation (Simmel 1989; Luhmann 1997: 595-609). Culture is asymmetrical, thus biasing the interpretation of the world (Douglas 1982; Swidler 1986). Thus, a swarm is considered a social system differentiating itself from its environment and reproducing in time, using its social dimension to produce a kind of indeterminacy, which lends it flexibility in differentiation and robustness in reproduction (Parsons 1951; Luhmann 1995).

We propose to use the notion of swarm instead of the overused notion of masses in describing Nazi Germany (Lederer 1940; Arendt 1951; Fritzsche 1998, 2008). The notion of mass gives a picture way too coherent of the events unfolding, whereas a swarm relies on always well individually framed decisions. A mass is supposed to be driven by external urge, is considered to be fallen victim to unknown forces, whereas a swarm presupposes endogenously motivated choices, even if those choices are not to be taken to be identical to intentions the individuals would indicate if they were asked independently from each other. This is the emergent network effect any swarm exhibits. The swarm does not just draw on motivations to join it but produces motivations no individual would before have had knowledge of.

We propose to investigate how, from the late 1920s to the early 1940s, the Hitler swarm catastrophically brought the primacy of the functional differentiation of modern society in Germany to break down and reorganize itself. The swarm supplemented functional differentiation in its quality of a social movement enhanced by bureaucratic administration and dissolved when functional differentiation took shape again in the aftermath of Nazi Germany's military and moral defeat.

Our overall picture of German society in the first half of the twentieth century is thus one informed by the sociological theory of modern society. To deal with the dynamically critical communication fostered by the introduction of the printing press, modern society reorganized itself not as before in terms of social strata relying on domination but of functional systems relying on media such as money, power, truth, belief, love, and art (Weber 1978; Parsons 1977a; Luhmann 1997: 707-743). This does not mean that stratification ceased to exert influence. On the contrary, it dominated most thinking about society, except for utopian and revolutionary lines of thought, among both those intent on maintaining their influence and

those seeking to fit into a traditional order, while the semantics of society only slowly caught up with its structure (Luhmann 1980-1995). There was almost no political movement or party in late nineteenth and early twentieth century Germany that did not somehow search for a leader able to reorganize the 'Volksgemeinschaft,' the community of the people (Mergel 2005). This shows there was a search for domination and thus for stratification seized by a social movement which for its part was not organized in terms of social strata and was addressing a political system whose functional *eigen*-dynamics were clearly already recognized.

Differing systems logics of differentiation and reproduction thus interfere with one other, such as the logics of stratification and the logics of functional differentiation, producing numerous events and values in communication, structure, and culture that everyone involved found difficult to code and attribute to either one of these logics. No-one at the time would have been capable of the appropriate social calculus even if, with hindsight, stratification and functional subsystems, enriched by social movements and subverted by the publics of urban life, were not difficult to detect and tell apart. Also in hindsight, the difficulty consisted in accepting both a loose coupling of events and values and a tight coupling, the former producing the image of a population somehow acting out of an urge to be both rebellious and authoritarian and that fatally sought to image itself as a 'mass' (Reich 1975; Canetti 1962), the latter focusing rather on the formation of a state, which in both liberal and in Marxist thinking emerged as the dictatorial and totalitarian answer to a situation of increasing disorder (Fraenkel 1969; Neumann 1967; Friedrich/Brzezinski 1956). Yet even this distinction does not quite hold and becomes fractal when considering tight couplings in populations turning them into homogeneous publics if not indeed 'masses' (Lederer 1940) and loose couplings in the state giving it administrative diversity and bureaucratic conflict (Broszat 1981). It is therefore tempting to avoid looking at social structure and to concentrate rather on the character and psychophysics of the people as framed and scripted by their society (Adorno et al. 1950; Theweleit 1987-89), but that just gives the problem of explanation away.

The notion of swarm cuts through those different systems logics of differentiation and reproduction. Indeed, it benefits from all descriptions of masses, the state, and the psychophysics involved. But seeing the swarm as a parasitic movement emerging in the situation of Weimar Germany and dissolving with the breakdown of the Third Reich provides a more differentiated picture of all these different systems logics feeding on each other, engaging each other, and in due course even sharpening the distinctions between them. We therefore recommend looking at publics (Tarde 1989) and not at masses to avoid losing sight of who and what produces their and even their 'counter-masses' (Canetti 1962), viz. the Jews',

constitution in the propaganda of the both appropriately and misleadingly so called mass media.

And, like most recent research, we recommend treating social disorder as an organizational factor in its own right requiring people, leaders, political parties, and bureaucracies able to deal with disorder as much as with order (Broszat 1981; Lepsius 1986; Rebentisch 1989; Kershaw 1993; Reichardt/Seibel 2011). The leading issue is thus, on the one hand, a paradoxical organization of disorder feeding on it to motivate a state of exception (Fraenkel 1969; Drucker 1943), and, on the other, the capturing of this organization by industrial interests, a disoriented population reconfiguring itself as a *Volksgemeinschaft,* and the criminal seizure of power by a political movement as much as a band of gangsters (Sohn-Rethel 1973; Weinstein 1980; Kershaw 1998). The notion of swarm leads us to ask how a seizure of totalitarian power is possible while almost completely being dependent on public opinion (Moore 1993: 433-453; Kershaw 1980, 1985; Mommsen 1981).

Knowing that most historical research, which makes use at all of sociological concepts, solves that riddle by coming back to Max Weber's (1978: 241-246) notion of charismatic leadership to explain the phenomenon of Hitler's leadership, we try something else. Much as Michel Foucault (2007) dissolved the notion of power into a microphysics of it, we try to develop a notion of swarm, which acts charismatically on itself and symbolizes that self-referential anchor by reference to the name of a leader who consequentially must be present and absent at the same time. Hitler's charisma is a virus invented by him and his followers (Herbst 2010), such that we have to explain how that virus could become so powerful that it even forced the gangsters to become members of the swarm. They tried to stay ahead of it, which might be one reason for the Holocaust to happen, set off as it was by the firing squads, the *mobile Tötungseinheiten* running wild in Eastern Europe (Hilberg 2003).

III. Positive and Negative Feedback

A swarm consists of events and values of its own. Such events and values are determined operationally, that is via emergence, their substantial quality being of secondary importance. These events and values have to link up and attract further events and values of the same type, while they do not necessarily have to comply in essence with what they are used for. Thus, coding comes first and questions of nature come second.

This is to define the problem with reference to social systems, allowing us to consider it in terms of a social calculus combining differentiation in fact with reproduction in time (Luhmann 1980) and putting structure in charge of linking events and values inside and

outside the system and culture in charge of ensuring motives with preferences biased toward certain selections. In social systems, any variable of the calculus has to be treated as not only relational but also reflexive; it identifies itself in relation to other variables. This is why the calculus as such can be determined by sociological theory but has to be fleshed out for modeling by empirical research. The reflexivity of any variable means that it contains its own possible switch to an alternative logic of differentiation and reproduction, depending on what and how alternatives are present in a given network of meaning references (White 1992, 2008). Again, it is only empirical research, including historical research, that enables us to examine how actors who are also observers call upon a network from which to make selections. And it is second-order observation that, depending on the situation, reinforces or moderates the structure and culture relied on in making these selections. Second-order observers act in accordance with the design of situations by which they expect observers to orientate themselves. In social systems everyone is both observer and second-order observer, so that our calculus of reflexivity describes how social systems organize themselves.

Looking at operations rather than substance, coding rather than essence shifts our observational focus (both first and second-order) to the structure and culture of the events and values that differentiate and reproduce the swarm that seized Germany in the 1930s. We cut through a wealth of literature by looking only at what kinds of positive and negative feedback might have been responsible for the emergence of the swarm. Once it was constituted we can examine how it succeeded in maintaining itself for so long with the help of mechanisms such as distributed functioning, amplification of fluctuations, and mutually tolerant interactions.

In fact, possible candidates for the positive and negative feedback mechanisms were identified early on, though not informed by the notion of swarm. The political imagery of the time was both attracted by the search for tight control of unruly events and values into what sometimes went by the name of a state of ants (Porombka 2002; see also Werber 2009) and obsessed by the idea that some conspiracy was either being hatched by others or could be forged by oneself if appropriate action were to be taken. The National Socialist groups in Munich's beer halls modeled themselves on the image of a putative Jewish world conspiracy, rendered plausible by the everyday observation of society conveyed through the instantaneous communication of ideas, fears, and feelings in the news, entertainment, and propaganda disseminated by the mass media (Heiden 1945; Large 1997). A conspiracy of any kind seemed to be both responsible for the miserable state of affairs in the world and to be wished for to show that somebody at least is in some kind of control. Communication at that time was electric and highly nervous (Asendorf 1989; Radkau 1998). Few considered parliaments, industry, or science capable of dealing with the situation; almost everybody expected a

political leader to emerge and show everyone else the way (Mergel 2005). This was accompanied by a widespread longing for a united *Volksgemeinschaft* which would put an end to the Marxist class struggle. After the Paris Peace Treaties of 1919–20 had removed large territories from the German Empire, *Volksgemeinschaft* became a virtually ubiquitous slogan for nearly all political parties. During the Weimar period, the term was used as a tool for agitation, albeit with varying and in some cases diametrically opposed connotations (Götz 2001; Bajohr/Wildt 2009; Gotto/Steber, forthcoming).

Without employing the concept of swarm or the terms positive and negative feedback, Carl Schmitt in 1933 nevertheless identified precisely what kinds of positive and negative feedback were necessary and possible at that time to give first the National Socialists and then Adolf Hitler the opportunity they seized, consolidated, and exploited as the niche they occupied (Schmitt 1933; Schmitt's engagement with the Nazis is analyzed by Mehring 2009). The negative feedback concerned all events and values considered to relate to a mechanistic, functionalist, and anonymous 'system' of society (Schmitt 1933: 12, 32, passim), encompassing a liberal constitution in politics, positive norms in law, market competition in industry, positive research in science, abstract art, and fathomless, viz. Jewish, intellectual culture. These events and values were of course widespread; indeed they dominated Weimar Germany on its way into and out of a functionally differentiated modern society. Yet, the more widespread they were the more convincingly they could be addressed and discounted as events and values of a societal structure and culture to be rejected, thus giving an ideological self-description of society a lever to disregard a prevailing reality clouded though it was by the absence of any understanding of it. The overall understanding of Germany was that of a nation and restrained empire, not that of a state having to deal with a functionally differentiated world society.

Positive feedback, on the contrary, concerned all events and values considered to generate the living entity and unity of a people, obediently and loyally led by a leader who did not tyrannically or dictatorially issue arbitrary commands but was himself bound by the giving of commands that everyone could see and judge to be legitimate and valid in a given, and especially present situation (ibid.: 35-42). The power claimed by and for the leader was totalitarian not only in demanding complete submission by the community but also in refusing any differentiation that set limits to defining which issues were the concern of leader and followers and which not. Everything was important because the life here and now of the people was concerned. To control the information overload that came with such an understanding of importance, political issues were reduced to the decisively deliberate if not arbitrary handling of unquestionably present opportunity. Hitler's regime, first in the

movement, then in the party, and eventually in the state operated with the one and only idea of immediate and real presence (ibid.: 42). The selectivity and thus effectiveness and efficiency of this principle cannot be overestimated. It means that any issue and question that did not comply with the criterion of presenting an overwhelming opportunity here and now could safely be discounted. The ideology of an all-important presence served to do away with a dismal recent past that was to be substituted by a supposedly magnificent distant past and immediate future. It allowed everybody to invent glorious expectations on the spot and to undo any learning that with respect to a more appropriate account of past and present would have been necessary.

Hitler's style of leadership has often been described: its three pillars, so it seems, were ingeniousness in strategy, at least at the time of seizing power and in the early war years; the refusal to read, let alone study files; and the both impressive and confusing ability to forgo any decision he did not consider ripe, leaving others to sort out the situation they were in by some kind of natural selection (Mommsen 1981; Noakes 1980, 2004, 2008). All three depend on that single ideology of only the presence being important.

The most improbable understanding within any realistic account of conditions, namely that of *Artgleichheit*, 'racial identity,' between leader and followers (Schmitt 1933: 45/6), allowed identical definition to be claimed for every situation, a claim that gained in validity in the increasingly catastrophic course of the regime and the swarm carrying it. *Artgleichheit* was the epitome of the unity of the distinction between negative and positive feedback since it was a criterion for distinguishing events and values that was as sharp as it was arbitrary. It placed undecidability if not emptiness (Laclau 1994) at the center of the swarm system because it had to be decided at any moment but was devoid of any substantive criteria. It therefore ensured that an understanding of the respective situation could be organized without ever coming into conflict with principles. Hitler was known to refuse any formal procedure for fixing principles, for instance in a new German constitution, precisely to make sure that the same possibility of disputing which principles were to be followed in accordance with the one and only criterion of *Artgleichheit* was never lost.

Positive and negative feedback were thus unified by a sharp but empty criterion for telling them apart, powerful enough to count large numbers of events and values in, and to count even larger numbers of events and values out. Interestingly, the ratio of positive to negative appears to have changed or at least fluctuated during the years before and after the seizure of power in 1933, with small numbers of events and values initially attracting positive feedback and large numbers provoking negative feedback. The years of the seizure of power, then, see the dominance of events to be positively enforced, with negative feedback receding and in

fact withdrawing within the domain of police work and concentration camps, while at a later date and during the war and the persecution of Jews the number of events and values producing negative feedback came to dominate the increasingly uncertain tally of events and values involving positive feedback. In the end rejection of alternatives, backed by sheer terror, became more important than attraction to Nazi ideology and order.

Note that all three constituents of the Nazi regime identified by Schmitt – the state, the movement, and the people (Schmitt 1933) – were necessary to form, maintain, and control the swarm.

The state ensured that decisions were in fact carried out. At the same time it made sure that even the negative feedback was backed by the imagination of an order which the German population most of all longed for. Identified with law, orderly procedure, and disinterested service to *Führer* and people the state was to guarantee that nothing could be outright wrong. The same some years later will apply to the army, which was good for and recruited plenty of events that could only positively be fed back. As long as state and army worked with the Nazis there was no reason for the swarm to fear to be led around by the nose by a gang of criminals eager to build political and economic fiefdoms.

The movement was in constant search of events to be controlled by positive and negative feedback without ever actually formalizing itself into a party, which as such would have less scope to search the social space for further events to be controlled. Hitler ensured that the party organization proper did always keep the upper hand over the state bureaucracy. The *Gauleiters* appointed by the party to rule certain territories always held more sway than any administration. They were bound directly and by ideology and loyalty to the *Führer*, were always to some extent outside even the party organization (Noakes 2004) and thus acted as proxies of a movement that was meant to never stop.

And the people were in fact put in a position of monitoring every move of the regime either because they were successfully controlled by terror, fear, and enthusiasm, or because they were beginning to escape this control (Mommsen 2009). Power, as we know, depends on threats of violence that bind as threats and not by being executed; yet this demands the most subtle, albeit terrorist calculus of what will of power is accepted and answered for by the people by constantly deciding anew which threats will have to be executed to maintain what power of all other threats (Luhmann 1979, 2000a; Foucault 2007).

These three constituents worked together, giving rise to a system of totalitarian rule exercised and populated by a swarm in which not even Hitler was the factual master of design but, being part of the process, had to experience and learn what was possible and what not (Broszat 1981; Bracher/Sauer/Schulz 1962; Bracher 1993; Tyrell 1975). If the basic unit of

survival in the camps was the pair (Luchterhand 1967), then the basic unit of the swarm was the triple: observers calculating the chances of perpetrators to terrorize victims.

IV. Re-Entry

The swarm was terrorized and terrorizing. Triggered by attempts to undo the defeat of World War I and to prepare for a new, a victorious war, violence turned into a self-evident attractor selecting in those who were prepared to exercise it, and selecting out those who were not (Herbst 1999; cf. Herbst 1982 and 1997). Control of leaders and followers was mutual, i.e. cybernetic. It was one operation, which constituted the swarm, combining negative and positive feedback, structure and culture, into one and only one form, which then struggled to maintain itself. As culture focused on bias, and structure on differentiation, form in fact contained the bias as well as reflection on it, and contained the differentiation with respect to all elements of it as well as their distinction from one other. 'Form', which we model as the *eigen*-value of the recursive function reproducing the system (von Foerster 2003), is here considered a self-referential operation producing its own space of distinction (Spencer-Brown 2008; Kauffman 1987; Baecker 1999).

Our notion of swarm thus becomes a sociological instead of a strictly biological one in that it refers not only to network but also to domain (White 1992, 2008), and not just to behavior but also to meaning (Luhmann 1995). The swarm embeds itself self-referentially in first-order observation of positive and negative feedback and second-order observation of dealings with the form the distinctions of the swarm produce on both its inside and its outside. Any social swarm is more than a mass on the move. It is presentation *and* audience (Goffman 1959), actors *and* publics (Tarde 1989), and it consists of elements that include not just individuals, actors, or actions, but also communications. Communication produces redundancy in respect to variety (Shannon/Weaver 1963; Bateson 2000), and thus meaning with respect to both system and environment. Operations as well as symbols differentiate and reproduce the swarm in relation to its surrounding social, mental, and natural environment. They do not isolate it from, but relate it to overall society.

The swarm differentiates itself and reproduces in distinction to, i.e. in relation to its environment where it finds individuals and their mental habits, society and its social structures and cultures differing from those of the swarm, as well as matter and nature that both challenge and support the selection of structure and culture (Malinowski 1944). The Hitler swarm thus counted its elements of communication with respect to their identity which never lost sight of both sides of the distinction, the inside and the outside of the swarm. It

monitored its outside and watched its inside. This is what made terror the overall carrier of the swarm. Terror was wielded and received. It determined what happens to those yielding to it and those resisting it. It had an exact understanding of the improbability of its own success and was therefore constantly calculating and moderating itself. It had its focal points in marches, gatherings, on the battlefield, and in concentration camps (Neurath 2005; Sofsky 1999), but spread into street life, families, offices, and factories as well (Thamer 1986, 2001; Thamer/Erpel/Sembach 2010), leaving executioners as well as followers and persecutees in constant hesitation about whether to go ahead or not, to join or not, to yield or not.

Terror was complementary and fractal. Its asymmetry was perpetually at risk and at stake. Offenders and victims knew each other, and they knew that their roles could switch even if this seemed impossible at the moment and even if it seemed almost cynical to consider such a switch in situations where all weapons are held by one side. Under the threat of terror the swarm organized itself in accordance with a distinction between two zones of indifference (using Barnard's 1968 notion), the boundaries of which were closely watched. There was the zone of indifference inside the swarm where everyone merely had to keep in step, and there was the zone outside the swarm where ordinary life carried on and all kinds of business was conducted. This indifference meant that for the moment the selection of possible communication followed its routines and produced a kind of normality. The positive and negative feedback we have mentioned related these two zones to each other and monitored their boundaries. Inside the first zone individuals were safe because they kept in step, and inside the second zone they were also safe because and as long as what they did made no difference. But as the terror calculated the improbability of its success, the boundaries of the two zones shifted and fluctuated, producing a kind of second-order terror, which intimated to everyone that no-one was safe and everyone had to be wary.

Two mechanisms structured this unstable situation: the double mass and the threatened leader. The mechanism of the double mass (Canetti 1962) helped the swarm produce a picture of itself, an imaginary real other, which was the inversion of the swarm or the swarm turned into a block of passive behavior. This was the role of the Jews considered to be a conspiratorial swarm of its own, demobilized, persecuted, destroyed, and thus reproduced as the negative image of the successful Hitler swarm (Hilberg 2003; Aly 1999; Aly/Roth 2004). And there was the mechanism of the threatened leader, Hitler coming from the lowest ranks of a German army defeated in World War I, fighting the alleged oppressive Treaty of Versailles, threatened inside and outside his party and inside and outside Germany by more or less unknown enemies who were all after his head (Kershaw 1998). Only these two

mechanisms taken together assured the fractal and self-mirroring nature of the swarm producing and being produced by its own terror.

Hitler's role was therefore the most peculiar one, charismatically producing a rhetoric of his own while anxiously testing and reconfiguring his grip on the German people and presenting himself as both the figure to be protected by the *Volksgemeinschaft* and the one threatening and terrorizing it (Burke 1957; Lepsius 1986; Mommsen 1981; Herbst 2010). He was goat and butcher, scapegoat and hangman, villain and hero at the same time (Glaser 1989; Girard 1977). He was the one too many who, by being over present, let Germany switch from social disorder to order, and the one too few who, by being absent almost everywhere, let the swarm organize itself not around an empty core, for swarms have none, but somehow along its underdetermined boundary. He was the one who threatened all others with death and is himself threatened with death, and thereby performs the role that could be imitated by all Germans, including those he had had killed.

This paradoxical construction assuring the scalability and fractal nature of the swarm culminated in the unconditional insistence on loyalty by Hitler, the party, and everyone else (Schmitt 1933). Loyalty meant to accept terror, to seek shelter, and to exercise terror at the same time. It was the re-entry of the form of distinction into the space of distinction. Loyalty meant to abandon oneself completely to the demands of the respective present while calculating sharply what future it would yield, and just as stringently to keep a constant check on whether everyone around was threatening, to be threatened, or indifferent.

Using Spencer-Brown's notation for his calculus of indications (Spencer-Brown 2008), we thus have a simple four-variable and seven-value form to model the social calculus constituting and implemented by the Hitler swarm. This calculus gives us the network of distinctions used to search the social space for events and values able to differentiate and reproduce the swarm:

Hitler swarm = terror ⌐ n±1 ⌐ loyalty
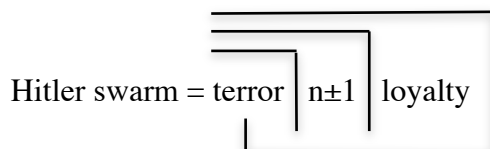
Our four variables are *terror*, *n±1*, *loyalty*, and the *unmarked state*, and our seven values are these four variables together with the three distinctions defining the form, *terror/n±1*, *n±1/loyalty*, and *loyalty/unmarked* state, the last of these three re-entering the form into the

form. Note that the values and their distinctions can appear in any society. It is their combination into one calculus which gives rise to and defines the German version of fascism.

Terror here means the threat of violence combined with the execution of physical violence, a form of political communication constantly calculating how much physical violence was necessary to maintain the threat of increasing it. With this procedure, the totalitarian state documented that there were domains just outside its sphere of influence that were aware of having to pay for this remaining outside in various forms.

The number $n±1$ means that the swarm always counted its members by adding one member, $n+1$, namely Hitler, who at the same time was lacking in any concrete instantiation of the swarm, $n-1$. He was thus added as lacking, $n±1$, giving the swarm its flexible and situational coherence.

And *loyalty* means that the trust in present fellowship was more important than program, principle, or static morality, let alone law or economic rationality (Weber 1978: 241-246). Moreover, *loyalty* had the advantage that it could be tested by enforcing immoral or illegal behavior, which was then even more binding.

The distinction *terror*/$n±1$ makes sure that any move of the swarm consisted in one adding himself as the offender to the swarm, resulting in someone else being counted out. The Hitler swarm was an instantiation of a terror, which knew no other rule than that counting was supreme if not the real sovereign, showing its absolute power by producing death in neatly documented, innumerable numbers. Marshall McLuhan speculates that counting comes from the sense of touch, thereby assuming that communication is not only embedded in a precise knowledge of where to belong and whom to belong to but is also constantly coding, counting, and numbering who belongs how and why, with whom, and how long (McLuhan 2001: 115-128). Georg Simmel was among the few sociologists to believe in a social quality of number (Simmel 2009: 53-128); Robin Dunbar and others have recently rediscovered it (Zhou/Sornette/Hill/Dunbar 2005). But there is scant knowledge about how communication structures and cultivates itself to let people know, see, and feel that such counting and numbering is being done. Terror is one of the most violent ways of doing so, and one that addresses not only those to be terrorized but also third parties, onlookers, not to mention those doing the terrorizing.

The distinction $n±1$/*loyalty* is then the complement of the first distinction, not, however, merely reassuring everyone that loyalty may be the condition for being counted in and spared from terror – which remains a terrifying message – but also shaping and driving the swarm by showing that loyalty was not a resource that could be generalized at will. Instead, there were limits, numbers again, to how many loyal followers any one leader could support and there

was thus fierce competition among those seeking to prove their loyalty and to disprove that of their competitors. Loyalty did not make things easy but added further elements of positive and negative feedback to the swarm as it differentiates and reproduces itself.

The last distinction is also no comfort. It distinguishes *loyalty* from the *unmarked state*, thus producing communication to the effect that nobody can know what will constitute the next instances of necessary loyalty. You do not know what will be expected of you; and you do not know what you will be able to endure. Uncertain futures, uncertain environments, and uncertain social demands abound, signaling that the only resource to go by is loyalty itself. This, again, is terrifying, re-entering the whole form into the form, making it self-referential and fractal. There was no single communication on the street, in the family, in the office, at the workbench, in the army, or in concentration camps that was not compelled to convey its own terror as much as most strategic moves in army headquarters, party, and administration.

V. A Society Nevertheless

The Hitler swarm, while moving and eventually destroying the whole of Germany, did not consume the whole of Germany. It defined its own identity in drawing a distinction with at least two if not more sides. Both party and army acted as agents of upward and downward social mobility without actually abolishing social stratification, notwithstanding any talk about *Volksgemeinschaft*. The war economy meant further steps toward aligning urban and rural planning and life-styles, but this was nothing compared to the effects of industrialization of agriculture that came after the war. And the primacy of the functional differentiation of society in the political, economic, religious, educational, and aesthetic spheres was subverted, not absorbed. Politics was certainly the domain most affected, but the Nazi seizure of power also amounted to further differentiation of the polity in the rest of society as it sought to organize the whole of society on totalitarian lines. The economy received political support in having to orient itself toward a new economic world order dominated not by the land resources sought in eastern Europe but by new business structures emerging in the West (Sohn-Rethel 1973; Tooze 2006). Art and intellectual life in the Third Reich was both destroyed and revived by turning to political rite and historical myth in attempts to understand, frame, capture, embellish, and avert the singularity presenting itself before the world. German science and universities proved extremely versatile, to say the least. They have suffered to this day from the loss of Jewish intelligence while maintaining a kind of national pride which to this day makes sure that international standards do not always have to be met.

The pattern almost everywhere was that showed as well by the differentiation of the Christian churches, which were as much targets of Nazi *Gleichschaltung* as any other social sphere but had to be conceded certain minimal standards of autonomy, not so much because their officers and operative personnel resisted but because their publics resisted being completely absorbed by the swarm (Gailus/Nolzen 2011). This is where the distinction between 'mass' and 'public' introduced by Gabriel Tarde is most helpful. It helps us understand that the Hitler swarm did not consist of a mass and its double, the Jews and other enemies of the people, but of publics that did not cease acting as both organizers of focal attention and switches to other fields of interest (White 1995; Ikegami 2000). While a mass presumably acts as long as certain effects of contagion last (Le Bon 2006), a public renews itself with sensations of actuality comparing one sphere of differentiation with another (Tarde 1989). And nothing prevents these publics to bet at stock markets on firms feeding on those same publics complying with them (Voth/Ferguson forthcoming).

This is also why the mass media became so important. They deal with actualities, that is to say with information telling the new from the old. Here again *Gleichschaltung* was the rule, yet ironically it helped find out that if the functional spheres were to be aligned they had to develop their own professional understanding and practices in dealing with tasks involved. The lasting effect of the suspicion of 'manipulation' and 'Kulturindustrie' only shows that, in developing their standards of information, entertainment and advertisement, the mass media did in fact do a successful job of differentiation (Horkheimer/Adorno 2002; Enzensberger 1974; Luhmann 2000b).

This is true for another public as well, that of social work (*Volkswohlfahrt*, *Arbeiterwohlfahrt*, *Winterhilfswerk*, see Nolzen, forthcoming; Götz 2001), which was so important in guaranteeing support for the Nazi regime that the idea of calling the Nazi regime an instantiation of an attempt by the functional system of social work to absorb the whole of society seems not too far-fetched. The functional system of social work is actually the only system on the level of society that decides on questions of inclusion and exclusion (Baecker 1994) as otherwise only organizations can do by their usual practice of hiring and firing. It is thus the social system that ensures that the promises of the French Revolution to include the whole reading population in society are fulfilled at least by proxy.

Taken together, the mass media, social work, the *Wehrmacht* generating contracts for the industry and jobs for the people, and the terror maintained by the unfolding genocide may prove to be the structures in which the swarm was embedded while feeding 'autopoietically' (Maturana/Varela 1980) on itself.

This would give us an extended version of our swarm calculus, reading as follows:

Hitler swarm = terror | n±1 | loyalty | mass media | social work | war economy | terror
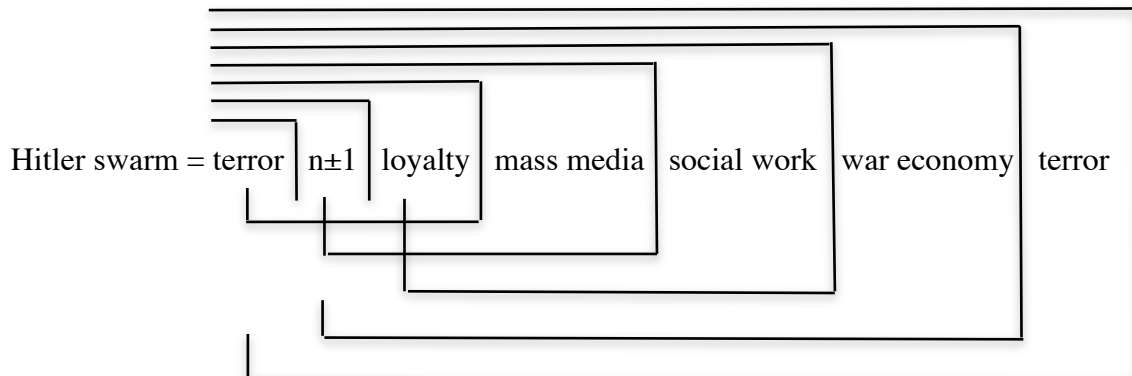
The propaganda of the mass media was constantly concerned with who was to be included in and excluded from the *Volksgemeinschaft*, hence addressing the question of the semantics needed to comply with the swarm while producing the double mass as the negative image of the swarm and as a second swarm deprived of language and witnesses (Agamben 2000). Social work both produced and drew on a loyalty which might even be called solidarity if we take Talcott Parsons' understanding of the term, which, as it were, emphasizes affect as the motivational base of social integration (Parsons 1977b: 247). We stick to the term of loyalty, however, since it connotes well with leadership and fellowship.

For industry, for men at the front, and for men and women maintaining supplies, the war economy literally meant counting the living and the dead, conveying a clear message to all on how to secure their survival. And the terror everybody heard about fed back into the terror everybody experienced so that the motives for selecting action appropriate to the values and distinctions captured by the form of the swarm could be both evident and self-fulfilling.

The doubling of terror in the calculus shows that both imagining terror and experiencing it was important to maintain the swarm. At the same time it shows that the swarm worked under pressure which absorbed so many resources that, of its own accord, exhaustion became a more and more attractive option to be reached when crossing the form back into its unmarked state.

VI. Gifts of Differentiation

The Hitler swarm recruited its packages of events and values from a structurally and culturally differentiated society which both complied and resisted. It complied in principle and resisted in operation. This combination of compliance and resistance only fed the swarm

since it evidenced a disoriented society that needed the swarm to reproduce and to sound out what kinds of differentiation develop what kind of robustness. This was the rule in interaction and organization as well. Both feature kinds of internal differentiation which allow them to comply with the swarm even while staying aware of alternatives.

Face-to-face interactions were deeply infected with observation of the swarm seeking to establish its events and values; yet, interaction maintained a certain humane autonomy and thus distance from the swarm both in principle and in operation while nevertheless being drawn into it over and again (Malaparte 2005; Hilsenrath 1971; Glaser 1989; Haffner 2002).

And organizations developed rules and routines, flat hierarchies, and quick turnover in personnel and programs in dealing with competitive and chaotic demands that, while in line with Nazi ideology, surprisingly proved to be identical with those subsequently attributed to modernization (Ludwig 1979; Gruner/Nolzen 2001; Nolzen 2008, 2011; Jüngerkes 2010).

In terms of swarm theory, the Hitler swarm thus is a perfect example of multiple mutually tolerant interactions (Bonabeau/Dorigo/Theraulaz 1999). It constantly produced not identical events and values but distinctions in events and values, which show how the swarm worked itself through German society while society reconfigured itself in relation to the swarm and to maintaining or even establishing the prominence of structural and cultural needs. As any role theory in sociology would have it, describing role sets and role complements and not just isolated roles (Merton 1957; White 1963), the swarm also consists of sets of events and values that contain their own negation and thus their outside, including the unmarked space that is an uncertain part of that outside. This is the condition for the swarm to be self-referential and fractal in this self-reference. It compels itself to pay attention to its differentiation and reproduction at all times if the swarm is not simply to dissolve as its events and values link up with other operations able to reframe them, while certain anchors, issues, matters, and symbols of both differentiation and reproduction become obsolete.

Note, however, that a society experiencing the singular phenomenon of such a swarm stands little chance of switching from its differentiation and reproduction back to the ordinary business of functional differentiation, routine organization, and reasonable moral interaction as long as the swarm manages to obey its own law of the amplification of fluctuations. The swarm differentiates and reproduces as long as it manages to produce surprises that can be accounted for only by re-entering them into the swarm. The form of the swarm is to be its own challenge that is to be answered only by the swarm itself. Speed, challenge, and moving by surprise therefore describe the dynamics of any swarm, ensuring that its mechanisms of positive and negative feedback, double mass and presently absent leader are constantly fed. Hitler's refusal to give Germany a new constitution in accordance with Nazi ideology, his

denial of an important role to state, bureaucracy, and administration, his seeking support among the *Gauleiters* who had to deal with ever-changing practical demands, his worship of presence combined with complete surrender to the idea of a struggle for life decided by evolutionary fitness, and last not least his military adventures and military errors and mistakes (Haffner 1979), ensured that it was the swarm and never any orderly rule that always had the last word. These were the conditions for fluctuation not only to happen but also to be noticed and amplified.

Hitler did not lead the swarm: he drove it by challenging its ability to be driven. When the swarm proved too weak to meet this challenge, he gave his final verdict on it by killing himself. The story of the Third Reich, however, is the story of fluctuations in differentiation and reproduction that were fiercely disputed by all kinds of social actors but which from 1933 to 1945 were repeatedly seized and amplified in feeding the swarm. What we call fascism is a political movement at the brink of dissolution into a more complex society doing everything it can to avoid this dissolution. The Hitler swarm we have sought to describe and model is the paradoxical attempt by German society to protect itself against fascism by the means of fascism. Everyone and everything worked toward Hitler as the figure who would never surrender even to his own terror (Kershaw 1993; Mommsen 2009): 'Wenn das der Führer wüsste', n±1.

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