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# Actor analysis and depersonalization

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## Abstract

A new kind of analysis (actor-analysis) is suggested and applied to the investigation of entities relevant to various studies of depersonalization. Five kinds of actors and recipients of action (targets) are defined: individual, supra-individual, abstract/situational, anonymous and residual. Changes in perception of these entities are tapped through changes in the relative frequencies of these actors and targets in front page newspaper reports. In a content analysis of *The New York Times* in sample years from 1852 through 1969 for the defined actors and targets, it is found that relative frequency changes in the following ways:

1. it declines for individual and residual actors and targets;
2. it sharply increases for supra-individual actors but remains constant for supra-individual targets;
3. it remains constant for abstract/situational (a/s) actors but sharply increases for a/s targets;
4. it declines for anonymous actors but increases for anonymous targets.

Analysis of these changes shows that only the frequencies of supra-individual actors and a/s and anonymous targets reflect genuine cognitive change, so that one can speak of a supra-individualization of actors and of abstraction and anonymization of targets. It is further found that over time actors become independent from targets and vice-versa. This indicates that particular actor-target links vanish. The joint structural effect of all these tendencies is dichotomization of the actor-target structure into one active node (supra-individual actors) and two passive nodes (a/s and

anonymous targets). Two possible counterarguments to the interpretation of the data are discussed and refuted.

## Introduction

Since Marx and Toennies, depersonalization has become a prominent item on the checklist of modern ills. It has been studied from various angles, such as social structure (with regard to mass society, anomie, bureaucratization), social perception (with regard to alienation and reification of social relationships), interpersonal behavior and personality dynamics (with regard to de-individuation and anonymity; for references see below). These different approaches to depersonalization include, implicitly or explicitly, assumptions about the perception of the 'social universe' but few, if any, are directly concerned with an empirical investigation of changes in *categories* of social perception. This lack has at least three considerable drawbacks. First, we don't know whether perception of the social universe changes, if at all, equally for all categories relevant to depersonalization; second, we don't know anything about the effect of perceptual changes in one category on other categories; third, we don't know whether there is a joint effect of different perceptual changes, producing a particular social universe.

The purpose of the present paper is to investigate — if only in an exploratory manner — changes in those categories of social perception that are relevant to studies of depersonalization. As a first step in this investigation, the analysis of 'actors' as categories of social perception will be discussed.

## Actor analysis

Two concepts are most frequently mentioned with regard to categories of social perception: People occupy *statuses*, play *roles* and supposedly perceive each other in these terms. Because or despite their prominence, it may well be that up to now these concepts have hindered a broader investigation into categories of social perception. Both concepts have a double objective in sociological usage. They are not only categories used to investigate social perception, they are also objective categories in general sociological descriptions.

This double objective has probably led to some elusive influences of standards of objective description on the analysis of social perception. At least since Max Weber, sociologists have leaned more and more towards the idea that in the last analysis only individuals act (methodological individualism, see Weber, 1947: 101; Watkins, 1957; Homans, 1964), since action is identified with 'intentional' action and intentions are only ascribed to individuals. On this basis valid objective sociological descriptions should contain (if any) only those non-individual actors that can be reduced to individual actors. 'Role' and 'status' as categories of objective description thus apply only to individuals (cf. Biddle and Thomas, 1966: 29). As such there might be little to object to this notion. But since the same concepts are also used as categories in research on social perception, perceived *non*-individual actors (intentional or not) have received little attention.

What is needed, therefore, is *an analysis of active entities in social perception without a pre-set restriction of such entities to individuals*. In this case, the ontology of the researcher would not dictate the ontology of his subjects. Unfortunately, there are very few apriori restraints that would guide the conceptualization of these entities. How shall one begin to classify 'actors' if it is not even clear what should be considered 'action'? Since, as argued above, ontological considerations and intentionality are no criteria for answering this question, 'action' cannot be defined with the help of an apriorily limited set of entities (e.g. individuals) but only by the widest margins of what can be considered a 'verb' in a particular language. An actor, then, would be any entity said or thought to be doing something. Coded in language all grammatical forms of a verb, including participial constructions, would indicate action and, a fortiori point to an actor. This excludes state-descriptions such as 'iron is hot' or 'the dog has fleas' and disposition-descriptions such as 'iron is heatable' or 'the dog has the capability of having fleas' in languages allowing such use of auxiliary verbs. The reason these sentences are excluded is simple but, in this context, decisive: sentences using 'to be' and 'to have' in this manner avoid identification of *action* itself, hence they neither state nor imply an actor performing an action. The first sentence could be reformulated to read: 'the iron gives off heat' or 'heat leaves the iron'. Here both actor and action are stated. But consider the sentence: 'it was announced that the war is over'. Although no actor is specified, the stated action 'it was announced' clearly implies an actor.<sup>1</sup>

In this context, then, an actor is any specified or unspecified entity said to be doing something, or having done something, or going to do some-

thing. This definition frees the researcher from the a priori assumption that actors in social perception have to be individuals. But one might ask: if social perception (coded in language) does not apriorily address itself to individual actors, how can one still speak of social perception rather than simply perception? The answer to this depends on what 'social perception' is supposed to mean. If it implies only the perception of individuals then nothing is gained by trying to free the definition of actors from individuals. It is not difficult, however, to see that if 'social perception' would be confined to individuals, it would arbitrarily exclude a great number of situations. Take a sentence such as this: 'The soldiers on the hill resisted the attack.' It could also read: 'The platoon on the hill resisted the attack' or even 'the hill resisted the attack', as is often read in war reports. Which one of these three sentences codes a social perception? As long as the subject matter of social perception is defined by a particular type of actor, analysis of actors in social perception is impossible. In order to avoid this, there seems to be only one way of deciding whether we deal with social perception or not: to decide whether the context is social or not, and that is no more ambiguous than deciding whether something falls within the field of sociology in the first place.

Analysing actors also necessitates consideration of what these actors act upon, their 'targets'. Otherwise, networks (structures) of actors could not be investigated. Consider questions like these: are the targets of actors actors themselves? Is a particular kind of actor, say, an individual, typically linked to a particular kind of target, say, physical objects? Do actor and target relationships change over time? These structural questions could not be answered without also analysing targets.

#### *Classification of actors and depersonalization*

Once the field of social perception has been opened to actor analysis, the problem of classification of actors arises. It seems obvious that no single classification will do, since different problems require different classifications. For example, one may be interested in finding out cross-culturally to what degree cultures commit themselves to actors at all, that is, to what degree they avoid state- and disposition-descriptions. In this case one would simply distinguish between actors and non-actors. Another approach may examine to what degree a culture identifies actors, or to what degree it allows unintentional actors. For the purpose of investigating actors/targets relevant to the study of depersonalization, another classi-

fication has to be chosen. This classification will be guided by characteristic shifts in actor/target identification assumed in or derivable from, various approaches to depersonalization.

In *social structural studies* of this topic, the most important perceptual changes involve shifts away from the personal identification of actors/targets to a structural identification. For instance, bureaucratization is said to favor identification in terms of such supra-individual aspects as social function, position or office away from identification in terms of such individual aspects as personal characteristics and names (cf. Weber, 1947: 329-340; Merton, 1957: 195-206; Ziller, 1964: 347f). A similar effect can be derived from studies of mass society (cf. Toennies, 1957; Kornhauser, 1959; Geiger, 1969: 169-184). Therefore, the classification in this investigation should include *individual* and *supra-individual* actors and targets.

In *studies on de-individuation*, the most important perceptual shift is a reduction in identifiability and an increase in anonymity. Conceptually, anonymity is distinct from supra-individual identification, although they are not always clearly distinguished. While the latter emphasizes impersonal, structural identification, the former emphasizes the lack of identification of actors or targets (cf. Festinger et al., 1952). For example, novel or unstructured situations, such as the breaking up of traditional neighborhoods, are said to produce anonymity and to reduce identifiability altogether (cf. Zimbardo, 1969; Milgram, 1970). The classification in the present investigation should thus include *anonymous* actors and targets.

Finally, *studies in alienation and reification* emphasize a perceptual shift away from concrete actors and targets to reified abstract actors and targets. For instance, to perceive abstract entities such as money, law, the market etc. as actors at all, is said to be an alienated perception due to reification of these entities under the influence of a market economy (cf. Marx, 1967: 265-301, 416-442; Lucacs, 1923: 94-123). The classification in the present investigation should therefore include *abstract* actors and targets.

The various perceptual shifts assumed in or derived from studies of depersonalization are linked by an overarching process of industrialization which supposedly includes all the antecedent conditions for these shifts: bureaucratization, mass society, breaking up of traditional neighborhoods, market economy etc. Thus, the perceptual shifts can be studied during any time stretch for which increasing industrialization can safely be assumed. The purpose of the present study is, then, to investigate — on the background of increasing industrialization — shifts in the perception of

all the actors and targets outlined above; to see whether these shifts, if they occur at all, hold equally for actors and targets; to find out whether these shifts are independent of each other; and to trace a possible joint structural effect. In this kind of project, it is impossible to consider all the connotations given to shifts in actor/target identification in different studies, and the context of investigation is necessarily limited. More importantly, the present project does not attempt to determine whether any shift in actor/target identification actually indicates depersonalization. Nevertheless, the results may be interesting to all students of depersonalization, no matter from what particular angle they may study the phenomenon.

### Method

In order to study the shifts in actor/target identification, the front page of a long-standing, supralocal newspaper was chosen for the following reasons:

1. The front page of a newspaper is action-oriented and will therefore contain less state- and disposition-descriptions than most other publications. Action (and a fortiori actors) in the material is thus maximized.
2. Front page reports can be taken intuitively as a social context without much controversy. This ensures that the subject matter is indeed social perception (at least of the reporter).
3. Unified by selection and editing of reports, the style of front page reports caters to the readership so that the actors appearing in the reports are unlikely to reflect just the author's idiosyncratic social perceptions. The supralocal character of the newspaper will ensure that the readership is not too parochial, thus allowing for some generalization from the findings.
4. A long-standing newspaper allows longitudinal comparison of actors and targets which enhances the comparability of the data over a time period for which increasing industrialization can be safely assumed.

The newspaper chosen was *The New York Times* since it has long continuity (founded in the fall of 1851) and has been supralocal from its inception. It was decided to sample the front page reports of every first Monday of a month for a whole year at intervals of ten years,<sup>2</sup> beginning with 1852. This yielded one hundred and fifty-six sample pages, spanning the period from 1852 to 1969.

On each front page, the first paragraph of a report was selected for coding, since it usually contains solely action reporting. If a report consisted of only one paragraph, it was ignored. This measure was mainly aimed at weeding out simple announcements often found on a front page of the 19th century.

#### Coding scheme

As indicated above, it is not the purpose of this study to determine whether any shift in actor/target identification indicates 'depersonalization'. The coding scheme below should therefore not be interpreted as operationalization of categories in existing theories of depersonalization. Rather, it should be viewed as a definition of types of actors and targets who, in all likelihood, will be relevant to theories of depersonalization.

*Individual actor or target:* identification of actor or target by name (with or without Miss, Mrs. or Mr.) and by name only without title, membership or any other supra-individual identification. Or a 'characterizing' typification such as 'the fourteen-year-old scoundrel replied ...'

*Supra-individual actor or target:* identification of actor or target as a collectivity, or as an organization, or as a suborganization, or as a position, such as 'the USA', 'the union', 'the office', 'the presidency'. Or identification by referring to membership in a collectivity, organization or suborganization, whether a name is specified or not. Examples: 'Smith, the American ...', 'the union leader', 'the official', 'the president'.

*Abstract/situational actor or target:* identification of actor or target as an abstraction such as 'pollution', or as a situation, such as 'the state of disorder'.

*Anonymous actor:* use of the passive voice without further identification of the actor. Example: 'it was heard that ...' Or an unidentified 'it' as subject as in 'it seemed as if ...' Or identification of actor by 'one' or 'people' or other such anonymous labels.

*Anonymous target:* if a target is clearly implied in the sentence but not further identified. Example: 'The president announced ...' The term 'announced' clearly implied a recipient but the recipient is not identified. Or identification of target by 'one' or 'people' or other such anonymous labels.

*Residual actor or target:* all identification of actors or targets not covered by the classification above. The most prominent member of this group is the class of inanimate objects. Example: 'the ship arrived' or 'the plane attacked' or 'the hills resisted the attack'.

*No target:* identification of an actor without implying or stating a target. In this case the actor is classified by the scheme above but also tagged with 'no target'. Example: 'The president sneezed'. This would be coded: supra-individual actor and no target.

This classification is not airtight but its precision was sufficient for the newspaper reports.<sup>3</sup> The number of borderline cases in the more than five thousand codings was negligible.

The reader will have noticed that 'persons' do not fall solely into the 'individual' group. Supra-individual, abstract or anonymous actors and targets may actually also be persons identified by supra-individual, abstract or anonymous labels. The idea behind the classification was not 'person versus non-person' but the different kinds of identification, be it of persons or non-persons. One could think of the classification as different foregroundings of individual, supra-individual, abstract or anonymous aspects of entities.

In order to reduce random variation and allow sufficient cell frequencies in actor-target matrices, the data of twelve decades were collapsed into four periods:

Period I:	1852 through 1872	( <i>n</i> =688).
Period II:	1882 through 1902	( <i>n</i> =2054).
Period III:	1922 through 1942	( <i>n</i> =1347).
Period IV:	1952 through 1969	( <i>n</i> =990).

The relative frequencies were computed as percentages of the total codings in each period.<sup>4</sup>

#### Results and discussion

The most surprising fact about the data is the consistent change over time. Even though the data have been grouped, there is no guarantee that they should behave in any orderly fashion. So far, the very variables 'actor' and 'target' are still on trial, but the data indicate that even though editors and reporters come and go (at intervals other than the four periods), there are definite trends in the identification of actors and targets.

## Actors

Figure 1 shows the relative frequencies of actors for the four periods. The *individual* actors decrease over the years, although the decrease in the entire period is only 8 percent. Note that in all periods, individual actors have the lowest frequency of all non-residual actors. The picture is more dramatic for *supra-individual* actors. They hold the top in all four periods, but they steadily increase from 32% in Period I to over 56% in period IV.<sup>5</sup> The increase of *abstract/situational* actors is roughly 3% (from 17.3% to 20.5%), surprisingly little compared to what might have been expected from the writings of alienation and reification. *Anonymous* actors steadily decrease from 25% in Period I to 12% in Period IV, contrary to what might be predicted from studies on de-individuation.

The relative frequency for *residual* actors (mainly physical objects) is already low in Period I, roughly 10%, and steadily declines to a negligible 3% in Period IV. The low percentage of residual actors also indicates that the coding scheme covers the reports quite adequately.

## Targets

The picture is reversed for targets, whose relative frequencies are shown in Figure 2.

There is a slight decrease in the frequency of *individual* targets (4.3%). Like the actors of this type, individual targets show consistently the lowest nonresidual frequencies.

*Supra-individual* targets increase only slightly<sup>6</sup> (3.1%) and do not play the dominating role observed for supra-individual actors. Instead, the target scene is dominated by *abstract/situational* targets who consistently top all other targets and whose frequency increased conspicuously from 25.6% in Period I to 40.1% in Period IV. A second substantive increase occurs for the frequency of *anonymous* targets (from 2.6% to 14.4%), matching the substantive decrease of anonymous actors. *Residual* targets oscillate around 12% except for a drop in Period IV.

It is apparent that relative actor and target frequencies do not change in the same way. *Predictions derived from theories of alienation and de-individuation* (increase of abstract/situational and anonymous entities) would hold only for targets, while *predictions derived from social structural studies in depersonalization* (increase of supra-individual and decrease of individual entities) would hold mainly for actors. Thus, to the degree that theories on depersonalization imply (or can be extended to

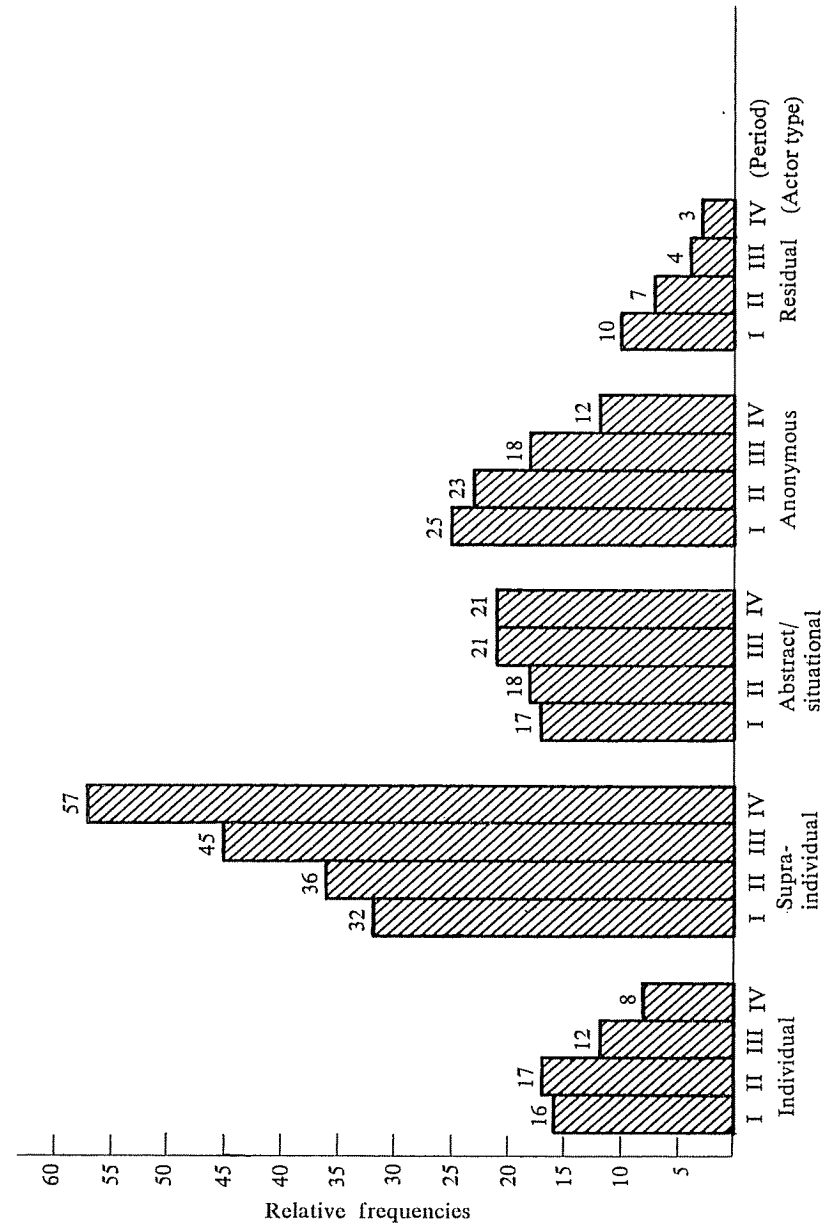


Figure 1. Relative frequencies (in rounded-off percents) for different actor types over four periods (Period I = 1852-1872; Period II = 1882-1902; Period III = 1922-1942; Period IV = 1952-1969)

imply) changes in perceived entities, they have to differentiate carefully between actors and targets. Yet, even separate predictions for actors and targets do not specify how changes in actor and target perception are related to each other. This question is addressed in the next section.

#### Actor-target networks

The most pronounced change in Figure 2 occurs in the 'no target' category. While in Period I, 32% of all actions are not directed towards any target, only 12.2% of all actions are not directed towards targets in Period IV. This means that *actors became more and more related to targets* as time goes on. However, without looking at the full matrix of the actor-target network, it would be impossible to say in which way they become more related.

Without this network it would also be impossible to say whether the changes in actor and target frequencies are related or not. It might be that changes in actor frequency cause the changes in target frequency or vice-versa. It could also be that actor-target links change erratically while the marginal frequencies develop consistently. Table 1 shows the change in target frequency for each actor over time. The first look at the matrices reveals a surprising consistency in the data. Frequencies for any particular actor-target links either remain fairly constant or increase or decrease consistently over time. For instance, the frequency in the supra-individual actor and abstract/situational target cell increases steadily from 5.4% in Period I to 23.4% in Period IV; or the frequency of the 'no target' cell for individual actors decreases steadily from 5.7% to 1.2%. This stability of the data is likely due to one of two causes: either the perception of particular actor-target links changes systematically and thereby produces systematic change in the margins, or the overall perception of particular actors and particular targets changes systematically and thereby causes consistent change in the cells. In the latter case, the cell frequencies would be simply the joint distribution of two independent variables (actors and targets). Calculating the expected cell frequencies from the margins and comparing them with the observed cell frequencies will help us in answering this question (i.e. calculating the  $\chi^2$  value for the actor-target matrix of each period will indicate roughly whether actor and target frequencies are independent of each other). For Period I,  $\chi^2$  (30.24,  $df=20$ ) approaches significance at the .05 level; but neither period II ( $\chi^2=10.72$ ,  $df=20$ ), nor Period III ( $\chi^2=14.63$ ,  $df=20$ ), nor Period IV ( $\chi^2=8.88$ ,  $df=20$ ) come close to a significant deviation from the ex-

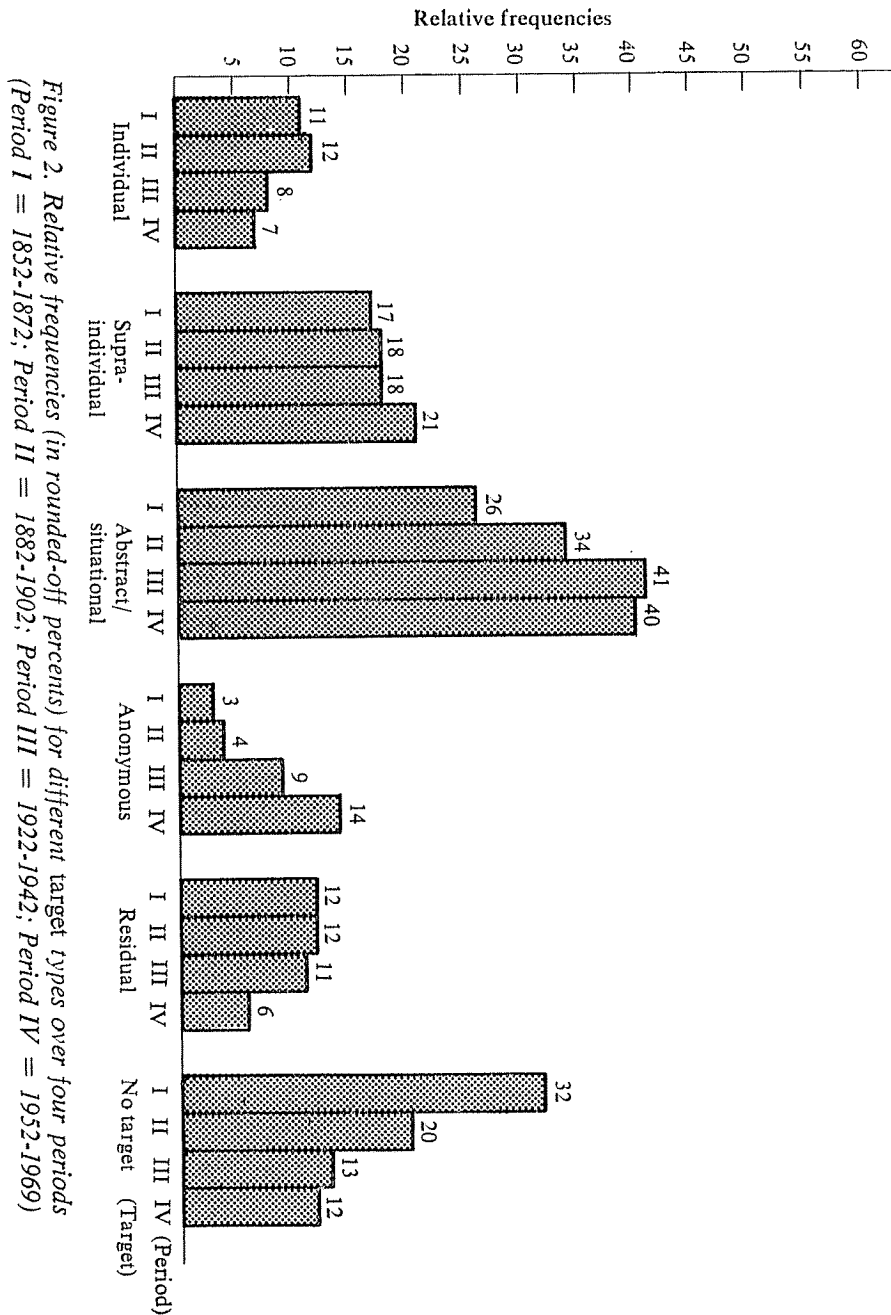


Table 1. Target-matrices of relative frequencies (in %) for each actor type and all periods

Individual actors					Supra-individual actors				
Targets	Periods				Targets	Periods			
	I	II	III	IV		I	II	III	IV
i	2.0	2.2	1.8	1.1	i	4.2	3.1	2.3	2.6
s	3.5	2.5	2.0	1.1	s	9.2	8.2	9.2	11.9
as	2.9	4.5	4.0	2.3	as	5.4	12.8	19.3	23.4
a	.6	.6	.8	1.3	a	1.0	1.4	5.1	9.5
r	1.2	2.6	2.0	.8	r	1.9	3.4	4.6	3.3
nt	5.7	4.9	1.6	1.2	nt	10.5	6.7	4.8	5.7

Abstract/situational actors					Anonymous actors				
Targets	Periods				Targets	Periods			
	I	II	III	IV		I	II	III	IV
i	1.0	1.7	.5	1.0	i	3.2	4.1	3.3	1.5
s	1.3	2.6	3.2	3.0	s	3.5	4.8	3.2	4.1
as	4.7	6.8	9.5	8.8	as	12.1	9.1	7.9	4.9
a	.6	.7	1.5	2.8	a	.1	.4	1.1	.6
r	1.3	2.0	1.6	.8	r	5.4	3.1	1.7	.6
nt	8.4	4.2	4.4	4.0	nt	.7	1.3	.8	.3

Residual actors					Key
Targets	Periods				
	I	II	III	IV	
i	.3	.6	.1	.2	i = individual
s	.0	.3	.4	.3	s = supra-individual
as	.6	1.1	.7	.6	as = abstract/situational
a	.3	.8	.3	.2	a = anonymous
r	1.9	.9	1.5	.7	r = residual
nt	6.7	2.8	1.1	1.0	nt = no target

pected cell frequencies. The low Chi<sup>2</sup> values for these last three periods support the hypotheses that actors and targets *change independently* and that the consistency of the cell frequencies over time is a result of consistent changes in the overall perception of actors and targets. The high Chi<sup>2</sup> value for Period I may be due either to a historical fluke or to the fact that in this period some actors and targets had not yet reached independence of each other. Again, one can use the Chi<sup>2</sup> as a measure of deviation of observed from expected cell frequencies, this time calculating the Chi<sup>2</sup> for single rows and columns in the actor-target matrices of the

four periods. Table 2 gives the comparative Chi<sup>2</sup> values for all actors and targets that achieved a significance level of  $p < .10$  in Period I.

In all cases the Chi<sup>2</sup> values decrease over time, indicating a development of increasing independence for anonymous and residual actors from abstract/situational targets and the 'no target' tendency. All other actors and targets had already reached this independence of each other in Period I. What does independence of actors and targets really mean? It means, cognitively, *that no particular actor-target links are perceived*. For example, abstract/situational actors are not linked to any particular targets. Assuming that the relative frequency of abstract/situational actors remains constant, links with these actors will increase for any target whose relative frequency happens to increase and decrease for any target whose relative frequency decreases. Statistically speaking, any change in an actor's relative frequency will be distributed over the targets in proportion to their relative frequency and vice-versa. Thus, the changing margins for actors do not explain the changing margins for targets, and vice-versa. There are independent perceptual changes going on.

Table 2. Chi<sup>2</sup> values for comparison of expected and observed cell frequencies (in %) of selected actor and target types for all periods

	Periods			
	I	II	III	IV
<i>Actor types</i>				
Anonymous	14.61*	3.66	3.78	3.43
Residual	7.58*	3.86	3.47	2.39
<i>Target types</i>				
Abstract/situational	7.77*	1.81	.89	.39
No target	11.58*	4.77	4.38	2.98

\*Significant at or below  $p = .10$  level.

#### Perceptual changes

The fact that actors change independent of targets and vice-versa does not tell us whether, say, the decrease in the relative frequency of individual actors is a genuine cognitive change or only a side-effect of the increase in the relative frequency of supra-individual actors. In short, we don't

know yet to which degree changes *within* the group of actors (or targets) are related to each other.

Since we deal with relative frequencies, a rise in the frequency of Actor A has to be matched with a loss in the frequencies of one or more other actors. If this loss is distributed proportionately over the other actors, we know that they are merely 'squeezed out' by the rising frequency of Actor A. A look at Figure 1 tells us that from 1852-1969 the relative frequency of supra-individual actors steadily rises while the relative frequencies of individual, anonymous and residual actors fall. The relative frequency of abstract/situational actors remains fairly constant. This suggests the hypothesis that the rise in supra-individual actor frequency simply displaces the individual, anonymous and residual actors in proportion to their relative frequency and that the frequency of abstract/situational actors remains unaffected. If this hypothesis is correct, we should be able to predict the margins of these actors for Periods II, III and IV jointly from their initial margins in Period I and from the changing margins for supra-individual actors. Table 3 shows the predicted and observed values for each period. Note that the predicted scores for Period III were calculated on the basis of the predicted, not the observed, scores of Period II; similarly for Period IV. The deviations from the predictions are so small (see the  $\text{Chi}^2$  values) that the hypothesis cannot be rejected. This means that it is more than likely that the only 'genuine' perceptual change occurs for supra-individual actors, and it means that abstract/situational actors are not affected by this change. While individual, anonymous and residual actors are proportionately replaced by supra-individual actors across the board, abstract/situational actors are probably context-specific and not replaceable (at least not in front-page news reports). In short, as far as actors are concerned, we have a *supra-individualization*.

What can be said about targets? Looking at Figure 2 we see that the relative frequencies of abstract/situational and anonymous targets are steadily increasing while individual targets, residual targets and the tendency to identify an actor without target ('no target') are steadily decreasing. The relative frequency of supra-individual targets remains fairly constant over time. This suggests the hypothesis that the rise in the relative frequency of abstract/situational and anonymous targets displaces individual and residual targets and the 'no target' tendency in proportion to their relative frequency and that the frequency of supra-individual targets remains unaffected. In this case we should be able to predict the margins of all but abstract/situational and anonymous targets for Periods II, III and IV jointly from their initial margins in Period I and from the changing

Table 3. Comparison of predicted and observed relative frequencies (in %) for each actor type for all periods

Actor types	Period I		Period II		Period III		Period IV		
	Observed	Predicted	Observed	Predicted	Observed	Predicted	Observed	Predicted	
Individual	15.9	14.8	17.4	11.8	12.1	8.2	7.9	8.2	
Supra-individual	32.1	—	35.6	—	45.1	—	56.5	—	
Abstract/situational	17.3	17.3	17.8	17.3	20.6	17.3	20.5	17.3	
Anonymous	25.0	23.3	22.7	18.7	18.0	13.0	12.1	13.0	
Residual	9.7	9.0	6.5	7.2	4.2	5.1	3.0	5.1	
				$\text{Chi}^2 = 1.17^*$			$\text{Chi}^2 = 1.91^*$		$\text{Chi}^2 = 1.52^*$

\* $\text{Chi}^2(3/05) = 7.82$ .

margins of the abstract/situational and anonymous targets. The observed and predicted data are shown in Table 4. Although the predictions are not as close to the observed data as they were for the actors, none of the Chi<sup>2</sup> values even approaches significance. Thus the hypothesis cannot be rejected. It is thus very likely that the only 'genuine' perceptual changes occur for abstract/situational and anonymous targets and that supra-individual targets are context-specific and not affected by change in other targets. Individual and residual targets and the 'no target' tendency are increasingly replaced by abstract/situational and anonymous targets while supra-individual targets remain unaffected. With regard to targets we find a process of *abstraction* and *anonymization*.

### Network changes

The described tendencies have a clear *joint effect* on the structure of the actor-target network that can best be graphically demonstrated (Figure 3). Since with one exception all cells in every period have a positive entry, the change in the network structure occurs not in the number but in the strength of ties. Each of the networks depicted in Figure 3 therefore omits the smallest entries (roughly 40% in each network), in order to bring the structural change into greater relief.

As can be seen from Figure 3, the structure changes, most of all, in the following respect: the increase in the relative frequency of supra-individual actors reduces the number of effective actors; the increase in the relative frequency of abstract/situational and anonymous targets reduces the number of effective targets; and both developments jointly create fewer but stronger actor-target links. The structure thus also becomes simpler and more compact.

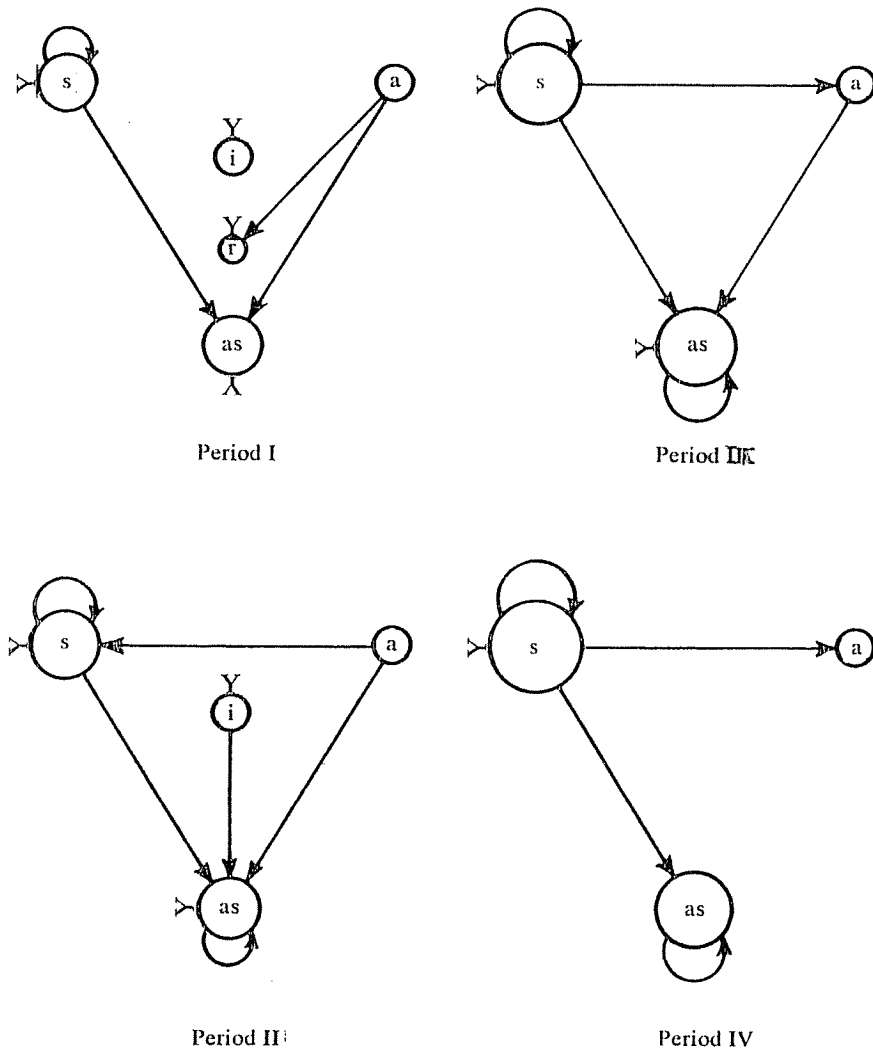
It is interesting to note that the abstract/situational node is an action 'sink' in all periods. In other words, action directed toward abstractions and/or situations either gets 'passed on' to other abstractions and/or situations or does not get 'passed' at all; it is unlikely that any such action is fed back to supra-individual or other nodes.

A rise in the relative frequency of action sinks implies an increasing *dichotomization* between active and passive nodes. The relative frequencies of abstract/situational and anonymous targets increase and thereby reduce the 'no target' tendency. As a result the networks of Periods II and III are more connected than the network in Period I. But the rising frequency of supra-individual actors, monopolizing the action, succeeds in making even the anonymous node an action sink in Period IV, thereby

Table 4. Comparison of predicted and observed relative frequencies (in %) for each target type for all periods

Target types	Period I		Period II		Period III		Period IV	
	Observed	Predicted	Observed	Predicted	Observed	Predicted	Observed	Predicted
Individual	10.8	8.9	11.7	6.5	8.1	5.6	6.5	5.6
Supra-individual	17.4	17.4	18.4	17.4	18.0	17.4	20.5	17.4
Abstract/situational	25.6	—	34.2	—	41.3	—	40.1	—
Anonymous	2.6	—	3.9	—	8.7	—	14.4	—
Residual	11.6	9.5	12.0	7.0	11.3	6.1	6.3	6.1
No target	32.0	26.2	19.8	19.2	12.6	16.6	12.2	16.6
			Chi <sup>2</sup> = 2.80*		Chi <sup>2</sup> = 5.13*		Chi <sup>2</sup> = 1.83*	

\*Chi<sup>2</sup> (3/05) = 7.82.



Note: circle diameters correspond to combined actor and target frequency of node, while length of arrows is arbitrary.

Key: i = individual; s = supra-individual; as = abstract/situational; a = anonymous; r = residual; Y = no target action

Figure 3. Actor-target networks for all periods (low frequency action omitted)

reducing the connectedness again. The structure is almost completely dichotomized into an active node and two passive nodes. Today, *the active world*, at least as gleaned from front-page news reports, *consists of supra-individuals, and the passive world of anonymous entities and abstractions*. And it may well be that this structural dichotomization stands behind the changes in both actors and targets.

#### Actors and targets in political contexts

No full explanation for these changes will be attempted in this study, the main aim of which is to describe the change in actors and target frequencies. But obvious trivializing counterarguments must be met. There are two such arguments which come to mind.

First, it could be argued that the findings reported in this paper are simply the result of *The New York Times* becoming more supralocal as time goes on. In becoming more supralocal it would deal more with actors who are only known to the readership by their supra-individual identifications; and in becoming more supralocal it would deal more with general and hence abstract issues.

Supporters of this argument could show that the percentage of supralocal news on the front page indeed increases. Here 'local' is defined with liberal allowance; it covers not only New York City but also the entire tri-state metropolitan area and the whole state of New York. 'Supralocal', then, is everything occurring outside this area. Thus defined, supralocal news makes up 65.8% in Period I, 71.7% in Period II, 70.4% in Period III, and 75.0% in Period IV. While it cannot be denied that *The Times* has always been mainly supralocal, the percentage of supralocal news nonetheless increases almost 10% over the years.

Second, it could be argued that the findings are the result of changing subject matter on the front page. For example, it could be that in former times the subject matter on the front page was mainly sensational news, allowing for individual actors and concrete targets, while later the percentage of political news on the front page — requiring more supra-individual actors and abstract targets — slowly increases.

Supporters of this argument could show that with the exception of Period II, the percentage of non-political news on the front page decreases. All news items can be said to have a political aspect, but all news is not therefore political news. A reasonable definition of political news could be any reports about the official business of political officials or organizations

and/or reports about any kind of power struggle (war, riots, strikes, etc.). Non-political news is thus everything that fails to pass for political news. Using this definition, the percentage of non-political news is 37.8 for Period I, 64.7 (!) for Period II, 35.4 for Period III and 27.0 for Period IV. These percentages are worthy of an investigation all by themselves, which cannot be attempted here. Yet, it must be admitted that there is almost a 10% drop in non-political news between Period I and Period IV.

However, in defense of the conclusions reached in this paper, one can point out that the developments of actor and target frequencies do not level off between Period II and Period III, as the percentage of supralocal news does, and that these developments do not dip between Periods I and II although the percentage of non-political news rises sharply between these periods. Nonetheless, much of the developments of actors and targets could be due to rising supralocal reporting and decreasing non-political news. This problem can be dealt with by recalculating all the data under the exclusion of all non-political news. This fixes the subject matter and thus answers to the second counterargument. And since *The Times* does not become more supralocal with regard to political reporting (oscillating between 80.75% and 83.3%), the recalculation will also settle the first question.

The subsample of 'political' codings is roughly 60% (3047 of 5069) of the overall sample. The results of a complete recalculation are quickly told: in no case do they contradict any of the previous findings, and in some cases they bring out the previously described developments even more clearly. The actor and target developments in a political context are very similar to the trends in the overall sample, as can be seen from a comparison of Figures 1 and 4 and Figures 2 and 5. Furthermore, the hypotheses stating that only the relative frequencies of supra-individual actors and abstract/situational and anonymous targets genuinely change, are equally substantiated. The increasing independence of actors from targets, and vice-versa is brought out slightly more dramatically, with decreasing  $\chi^2$  values of 34.42, 9.55, 8.29, and 7.64 for the successive periods. Again, the anonymous and residual actors, the abstract/situational targets and the 'no target' tendency had not reached this independence in Period I but gain it steadily from Periods II to IV. The network effect of increasing connectedness for Periods II and III and dichotomization of active and passive nodes in Period IV is also slightly dramatized in solely political contexts.

Without heaping any more data on the reader, something about the development of actors and targets in *non-political contexts* should be

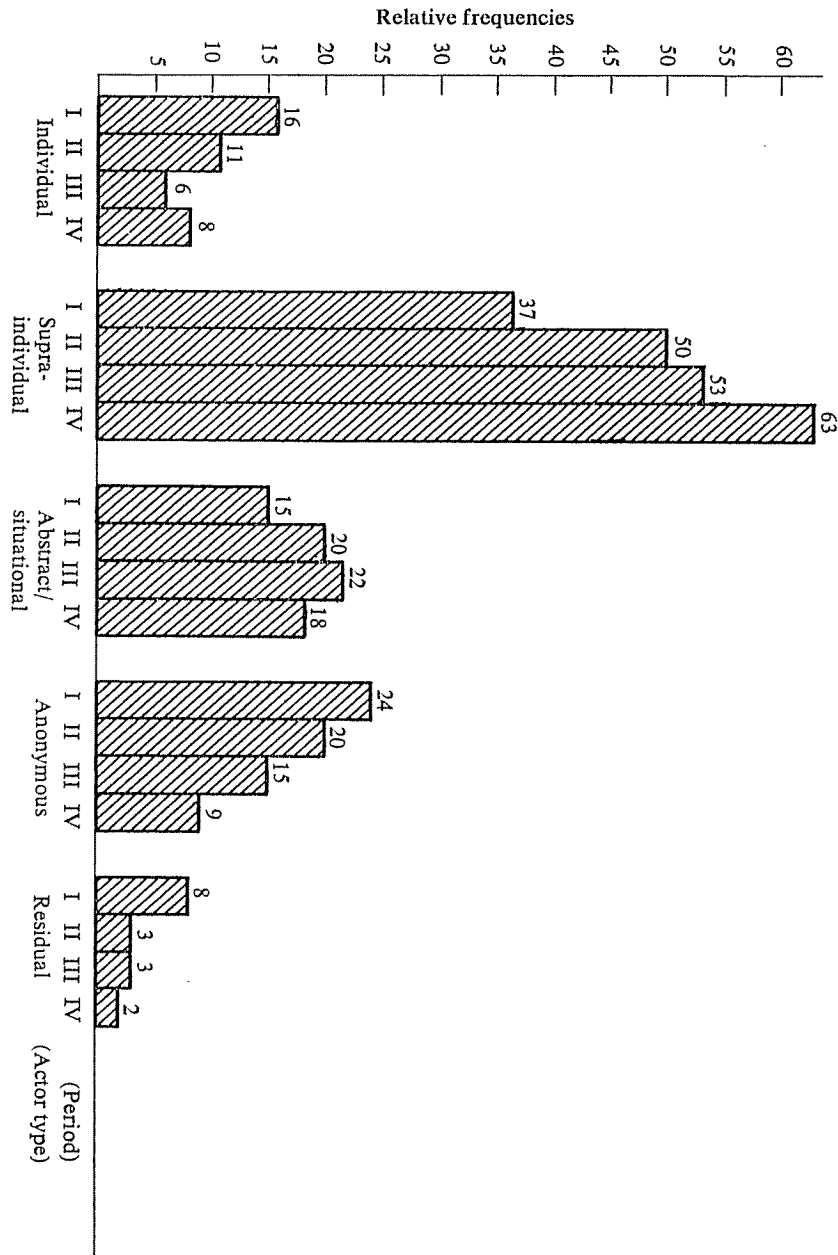


Figure 4. Relative frequencies (in rounded-off percents) for different actor types in political contexts over four periods (Period I = 1852-1872; Period II = 1882-1902; Period III = 1922-1942; Period IV = 1952-1969)

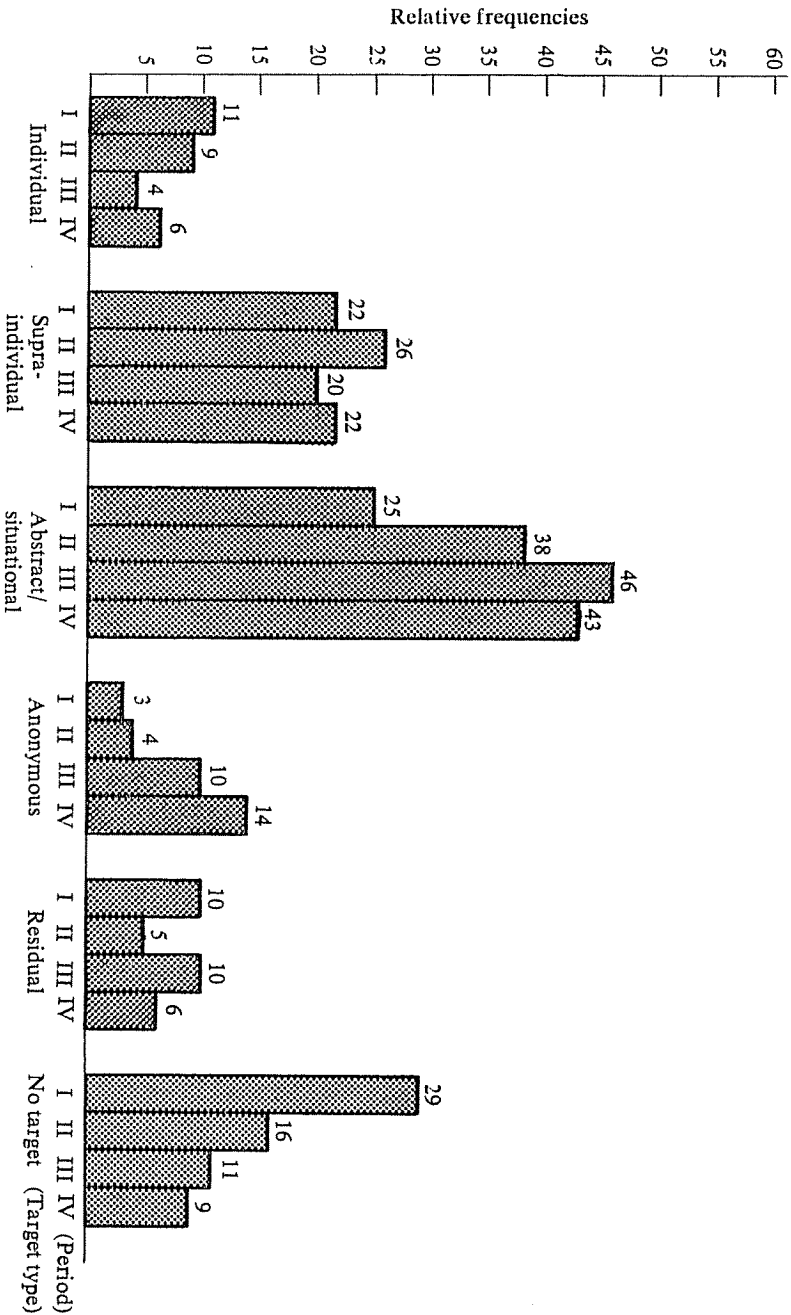


Figure 5. Relative frequencies (in rounded-off percents) for different target types in political contexts over four periods (Period I = 1852-1872; Period II = 1882-1902; Period III = 1922-1942; Period IV = 1952-1969)

mentioned. In many respects this development is trailing behind, and in one respect it is even different. Supra-individualization cannot be observed between Periods I and II for non-political contexts. It sets in only between Periods II and III. Development of independence of actors from targets moves slower for anonymous and residual actors and for the 'no target' tendency. The network effect is also trailing. Although the effective network in Period IV is reduced to three nodes (supra-individual, anonymous and abstract/situational), it is still in the intermediary state of connectedness with no dichotomization of active and passive nodes. The main difference between political and non-political contexts seems to be that in the latter the 'no target' tendency is *genuinely* changing (diminishing) rather than simply giving way to abstract/situational and anonymous targets as observed in political contexts. The effect of abstract/situational targets (but not of anonymous targets) is therefore reduced for non-political contexts.

In a speculative interpretation of these facts, one could imagine the following process: in all contexts, actual structures become more complex, but complexity develops faster in political than in non-political contexts. Social perception of actors and targets in this political context is therefore ahead of social perception in non-political contexts in the cognitive need for simplification. The simplification is achieved by reducing the number of effective nodes to three general and encompassing nodes (supra-individual, abstract/situational and anonymous), achieving the intermediary result of greater simplicity *and* connectedness of the actor-target structure. This creates a greater discrepancy between social perception in political and non-political contexts, and enhances the relative complexity of the latter; this discrepancy, in turn, increases the cognitive need for greater simplification and connectedness in the non-political context. Social perception in this context responds not only by reducing the number of effective nodes but also by actively reducing the 'no target' tendency, which results in a quickened development toward a simplified and connected actor-target structure. In the meantime, the social perception in the political context is ahead again in pressing for still greater simplification by dichotomization of active and passive nodes, while the social perception in the non-political context is still working on increased connectedness. If this interpretation is correct, one would expect dichotomization of active and passive nodes in the non-political context within the next decade. This interpretation is admittedly ad hoc and needs careful investigation of its own. However, the finding that people expect a higher degree of groupability (and thus simplicity) for structures of supra-

individual entities compared with structures of individual entities (cf. Lindenberg, 1971) lends at least some credence to the assumption that supra-individualization is motivated by the cognitive need for simplicity.

### Summary and conclusion

It was the aim of this paper to present actor analysis and to apply it to entities relevant to studies of depersonalization. The limited context, a newspaper, allowed simultaneous tracing of changes in various actor and target frequencies. Contrary to what might have been expected on the basis of depersonalization studies of social structure, alienation, and de-individuation, actor frequencies and target frequencies change quite differently. An increasing supra-individualization characterizes the change for actors; an increasing abstraction and anonymization characterizes the change for targets. In addition, it was found that particular actor-target links vanish over the analyzed period. All these tendencies have the joint structural effect of reducing the number of effective actors and targets, and (except in non-political contexts) of dichotomizing active and passive entities in social perception.

This does not imply any overall general historical trend. It may be that in pre-industrial Western societies, actors underwent a process of 'individualization' and targets underwent a process of 'concretization' before the opposite tendencies set in. Judging from the extensive use of abstractions in so-called primitive societies, as evidenced in anthropological literature, it is possible that such contrary processes took place (cf. Lévi-Strauss, 1966).

The conclusions reached in this paper are, of course, tentative until replicated in other data. A pressing question in this respect is how much can safely be generalized from the analysis of one newspaper. A class effect, imposed by the readership of *The New York Times*, could limit the findings considerably (cf. Namenwirth, 1970). *The New York Daily News* addressing itself to a different readership, could show very different actor/target frequencies. Therefore, a limited comparison was conducted between *The Times* and *The Daily News* for fifty-two sample days in 1969 (data not reported in this study). Any item reported both on page 1 of *The Times* and on pages 2 and 3 of *The Daily News* the same day was coded according to the scheme used in this study. The surprising result was that no significant differences could be found with regard to actor and target frequencies.<sup>7</sup> This finding is encouraging. It seems that the changes

in actor and target identification are general rather than specific to reporters, editors or readership of *The New York Times*.

### Notes

1. This kind of anonymous actor will be important in the analysis later on.
2. With the exception of 1969, since 1972 could at the time of data collection not yet be sampled.
3. A reliability check for the coding scheme in the face of the simplicity of both the scheme and the material seemed less necessary than in more complex content analyses. Therefore, the check performed was aimed at corroborating the simplicity assumption; it was not a full-fledged reliability check. A housewife, a student and a colleague were given five identical randomly selected first paragraphs from front pages of *The Times* together with above coding scheme. Their coding was identical with two exceptions: in both cases, a judge had coded a personal pronoun as 'individual' rather than the identification to which it referred. This provided considerable confidence in the simplicity of scheme and material.
4. Since there were thirteen sampled years, one sample year had to be omitted in this grouping. It was decided to omit 1912 since during this year only 24% of all sampled reports dealt with political subject matter (the average for all sample years is about 60%).
5. Some readers might be interested in the development of those supra-individual actors that are not persons, viz. collectivities, organizations and suborganizations. The percentages for these actors were 11.9, 11.0, 19.8, and 21.8 for Periods I to IV respectively, as compared to non-collective supra-individual actors (such as positions, memberships), respectively, 20.2%, 24.5%, 25.3%, and 34.7%. It is interesting to note that when one kind of supra-individual actor increases in frequency, the other does not and vice-versa. Though worthy of interpretation, this fact cannot be further pursued in this paper.
6. Again, some readers may be interested in the development of those supra-individual targets that are not persons, viz. collectivities, organizations and suborganizations. The percentages for these targets were 7.0, 5.0, 8.6, and 8.6 for Periods I to IV respectively, as compared to non-collective supra-individual targets: 10.4%, 13.4%, 9.4% and 11.9%. Both oscillate but remain fairly constant.
7. The big difference between the newspapers in this respect was in the flavor of the headlines (which were not included in the coding scheme). For example, when *The Times* would say 'Rockefeller', *The Daily News* would often say, 'Rocky', in the headlines. But both reports would follow with 'Governor Rockefeller...'

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