BRIEF REPORT

DANTON AND ROBESPIERRE, A PSYCHOLOGICAL STUDY*

YASUO MAKI

Research Institute for Humanistic Studies, Kyoto University

Purpose. - Both Danton and Robespierre were born in the petit-bourgeois families, grew up into the practice of law which was the petit-bourgeois occupation, and as revolutionaries belonged to the Montagnards which represented the petit-bourgeois people. Despite these common external circumstances, their political attitudes often differed from each other, finally leading to their fatal collision. How did this happen? Did their internal circumstances, that is, their personalities which might have been different from each other, not play a certain role in this seemingly odd happening? We started our study with these questions in mind. To establish, first, personality differences, if any, between Danton and Robespierre, and, secondly, functional relationships between these conditions and their characteristic political behaviors was the purpose of our study.

Instrument. - E. Kretschmer, by using the psychology of personality based on his famous constitutional typology, had already done his study on *Men of genius*, which included a few suggestive remarks on the motivating power of Robespierre's moralistic effort in the Revolution. To use Kretschmer's theory and to expand and develop his preliminary study on Robespierre would be a possible way on which we could proceed. We decided, however, not proceed in this way, for his psychology, it seems to us, is unsuitable to understand the complex functional relationships where internal and external "independent variables" co-determine "a dependent variable," that is, a behavior. We have come to this conclusion from the following points: (a) his psychological system, because of his exclusive dependence on intuitive synthesis and categorical dissection, has more unstable and abstract than stable and concrete criteria to define quantitatively his abstracts; (b) in contrast with the segmental drives, he considers temperament entirely immune to environmental conditioning and wanting no external objects

which reduces the tension caused by organic deprivation. Meanwhile, Kretschmer's functional inadequacy is basically corrected by Sheldon. He follows Kretschmer in the use of intuitive synthesis as basic approach to constitutional structure-function relationships, while he differs from Kretschmer both in his persistent effort to use concrete quantitative criteria as much as possible and in his conceptual orientation of temperament. His taxonomic components of temperament, named viscerotonia, somatonia, and cerebrotonia, are measured respectively by 20 temperamental traits, each rated on the 7-point scale. The components are stably patterned throughout life, while the traits as their dynamic expressions are sensitive to environmental conditioning, so that there in the components exist gradients which extend from a latent to a manifest extreme. Depending on the predominant environmental pressure, the components may undergo more or less latent and potential, or more or less manifest, surface expression. Moreover, the components have drive-like character and, if their behavioral expression is made too much latent or too long delayed, their owner organism suffers an increased tension which in turn motivates external behavior. Sheldon's temperament is therefore related to organismic adaptive behavior which results from the interplay of environmental and constitutional factors. Thus it is found that Sheldon's theory and method of temperament are susceptible to functional analysis in which the temperamental factors are delimited as necessary (but not sufficient or necessary and sufficient) to adaptive behavior, and that we can consider Sheldon's taxonomy of constitutional structure in relation to Freud's dynamics of instinct transformation under the environmental pressures, by having the latter's concept of instinct include the former's temperamental component, in addition to American behaviorists' "drive" which is usually identified by them with Freud's instinct. Because

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of these functional virtues of his, we decided to adopt Sheldon's constitutional psychology as a basic instrument of our historical study.

Methodological problems. - Sheldon's method of constitutional measurement, however, is a formal technique which goes through standardization by sampling from the population of present American people. In applying such a method to the two French men living at the end of the 18th century, there arises first the problem of whether the two groups, present American and past French, come from the same population or not, and, if they come from different populations, of how the knowledge of French population could be acquired, and, secondly, the problem of whether Sheldon's procedure for observing, interviewing and rating the subject under one's eyes is allowed to be adapted to non-existing men which are represented by groups of symbolic data. These problems could not be raised by using Kretschmer's method which goes through no standardizing processes. We have found, however, Sheldon's method is the same with Gestalt psychologist Lewin's "method of approximation," which permits us to solve these problems progressively. Therefore we have decided to start with the informations in hand on the French population at the end of the 18th century and with some modification of the procedure necessitated by the limitations of symbolic data. Our principle for applying Sheldon's method is to observe it as consistently and strictly as possible, and, whenever its adaptation becomes necessary, to describe our ways of adapting concretely, thus enabling for anyone to retrace our modified procedure.

Results (a). - We adopted as our source material the short biographies of Danton and Robespierre in *The leaders in the French Revolution*, written by the staff members of our cooperative study. This is a necessary procedure substitutive for referring to complete source materials. The behavioral data extracted from them were analyzed one by one in connection with the temperamental traits involved, which were then individually rated and collectively considered as component patterns. Danton was found to have viscerotonia 5, somatonia 5, cerebrotonia 1, in short 5-5-1 pattern, while Robespierre 1-4-6. By examining the limitations of our historical data as compared with the data gathered on direct observations and controlled interviews, it was provisionally concluded that Danton's real tempera-

mental pattern is strongly somatotonic and viscerotonic, and less cerebrotonic with the gradient not steeper than in 5-5-1, and that in Robespierre's real pattern cerebrotonia is most dominant, somatonia next, and viscerotonia weakest, and his pattern shows the gradient not steeper than in 1-4-6. One of the reasons why their real temperamental patterns undergo such exaggerated expressions lies in that highly impulsive characteristic common to their personalities, by which the superior temperamental components are accentuated and the inferior ones repressed. Thus in Danton, it seems to us, the viscerotonic and the somatonic more than others undergo excessive expressions, tonic compo they are constitutionally given, and tonia as controller of their expressions tend to be the cerebroneglected. We called this dynamism in Danton's personality manic-depressive. In Robespierre, on the other hand, the cerebrotonic component is severely accentuated, the somatonic mainly serves it, and the viscerotonia is largely repressed or expressed only in distorted forms. We named this dynamism in Robespierre's personality "idealistic neurosis."

At least one of the genetic conditions of the impulsive characteristic both of Danton and of Robespierre was considered to be environmental. After tracing the processes of their personality formation, we offered a somewhat hypothetical proposition to the effect that their impulsiveness is primarily conditioned by their particular parent-child relationships in early childhood, and is strengthened by other environmental conditions, some of which work with the primary one and some, later.

Results (b). - In examining political behavior of Danton and Robespierre, our first step was to make clear the socio-historical matrix as independently as possible of their personality factors participating in it, that is, the effort was made to extract the real (not psychological) socio-historical environment. We find that the interests of the petite-bourgeoisie represented by the Montagnards are basically opposed to those of the bourgeoisie, that their opposing relationships are temporarily dissolved during the war crisis, for which the bourgeoisie hold their craving for money in check under the control by Montagnards, but that, once the tide of war turns favorably, the bourgeoisie throws away the check over them, thus breaking down the Montagnard dictatorship. Our second step was to clarify the political behavior of Danton and Robespierre as the processes in which their impulsive

personalities and their temperamental bases participate in these larger processes. During the war crisis favorable to them, their characteristic life-works in the Revolution are achieved by the urge of their respective temperamental energies: Danton appeals to the French people as a whole without regard to the implicit antagonism between the bourgeoisie and the petite-bourgeoisie and succeeds in promoting national unity, while Robespierre works for the petit-bourgeois interests to the exclusion of the rich bourgeoisie and gives reformatory in the Revolution solid basis. At the favorable turn in the war which is unfavorable to them, Danton proposes realistically to amend the Montagnard policy which works for the sole interests of the

petite-bourgeoisie, while Robespierre holds to it faster than before, thus the antagonism between them becoming vital. It was concluded that such different reactions of Danton and Robespierre to the similar socio-historical environment are due to the differences of their personalities, and in spite of the fact that they belong to the same class, past and present, and to the same political party their different reaction, due to the differences of the "lower part" of their personality structures, that is, to the different temperamental patterns and to their common personality characteristic of strong impulsiveness which discloses the latter.

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Yasuo Maki (牧 康夫, 1925-) Graduated from Kyoto Univ. in 1949; 1949-1951, Assistant, Department of Psychology; 1951-, Research Fellow, Research Institute for Humanistic Studies.

AN ATTEMPT TO CONDITION FINGER REACTION TO VISUAL STIMULI

JITSUO KURODA

Seiwa Junior College

Ivanov-Smolensky and his co-workers of the Union of Soviet Socialist Republics succeeded in the formation of conditioning so-called "grasping reflex" to some visual stimuli in children between the ages of 4 and 15 years. Novikova of Ivanov-Smolensky's laboratory succeeded in making positive and negative conditioned reflexes in thirteen 9-10 year old children. The positive conditioned stimulus was an electric bell, sounded for two seconds before the presentation of food. 13 subjects were conditioned to an electric bell in 2 to 88 trials. The negative conditioned stimulus was a lamp lighted for two seconds before and for two seconds during the action of the bell. Of course, the combination of these two stimuli was not reinforced by food. 9 subjects were conditioned to the negative stimulus in 2 to 23 trials. Using the Ivanav-Smolensky's technique, Bayne, Winsor, and Winters in the United States of America tried to make same kind of research in two 6-year-old children, and found that conditioning to red light was acquired in 8 to 10 trials. It was reported, however, that a 4-year-old child required more than 200 trials to obtain grasping reflex to the sound of a metronome.

It is the purpose of the present study to investigate the conditioned finger withdrawing response to visual stimuli using Ivanov-Smolensky's technique. Experimenter changed the experi-

mental apparatus of Ivanov-Smolensky in the following ways. A sloping wooden tube was used in place of a metallic tube. The rubber bulb which was used by Ivanov-Smolensky was replaced with a finger withdrawing apparatus. A blue lamp was used as the conditioned stimulus in my experiment while an electric bell was used in Ivanav-Smolensky's experiment. The negative conditioned stimulus, was a red lamp, which was not reinforced by food. This was similar to the stimulus of Ivanov-Smolensky. These stimuli were lighted for two seconds before the administration of unconditioned stimulus, which was a round shaped piece of candy. The subjects were instructed to pull a string as soon as they perceived the candy through a small glass window which was made on the middle of the sloping tube. The subjects were rewarded with the candy which they obtained by their quick finger withdrawing reactions to the sighted candy through the window. When the subjects reacted slowly, the candy rolled down to the bottom of the tube, and disappeared from the visual field of the subjects in less than a second. The administration of conditioned stimulus and the child's finger withdrawing responses were recorded on the poly-graph. There were 21 subjects of which 11 were boys and 10 were girls. Their ages ranged from 5 to 7 years. Ohtomo Intelligence Test and Goodenough Draw-A-Man Test