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THE POSITIVE CONTROL CONCEPT AND TECHNIQUE

By

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This paper presents the "Positive Control" concept, its history, theoretical foundation, flexibility, and applicability as a field lie detection technique.

For more than a quarter of a century the polygraph profession was dependent upon two general types of interrogation techniques; (1) the Relevant-Irrelevant Technique (RIQ), and (2) the Peak of Tension Test (POT). Polygraphists such as John Larson, William Marston, Leonarde Keeler, and Clarence Lee used these techniques extensively in the laboratory and in the field.

Around 1943, John Reid, an attorney and polygraphist, proclaiming the RIQ contained a weakness was inspired to develop the "comparative response" question (Reid, 1947). Today this question is known as the "earlier in life" control question. This innovation offered an alternative and is considered to be one of the major contributions to our profession. Several major techniques developed over the next twenty-five years made use of this control concept. The era of the control technique has brought forth other developments in our profession. However, there are problems inherent in the concept.

If one is going to compare an examinee's psychophysiological reactions to different questions to determine which reaction is greater, one must first be able to say that the questions were equal at the beginning of the examination; that the control and relevant questions were balanced. However, to accomplish this the examiner would have to have a way of ascertaining the examinee's life experiences, thoughts, and fears. This is impossible. Therefore, we have no valid way of determining if the control and relevant questions which are to be compared at the end of the examination were balanced at its beginning. Herein lies the inherent weakness. The examiner must strengthen or weaken the control question by the addition or omission of certain emotional words, or by the emphasis or lack of emphasis on the control question in the pre-test interview. These decisions are based on the examiner's opinion of the subject's perception of the emotional importance of the control question as it relates to the subject's perception of emotional importance to the relevant question. Additional difficulties with control question formulation stem from difference of opinion regarding the proper development and wording of the control question.

The "positive Control" concept in the detection of deception involves dichotomous answers to identical questions, one of which must be truthful and one of which must be a lie (Reali, 1978). This dichotomous approach

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is not new or unique since it can be traced to Leonarde Keeler (Lee, 1953).

Keeler theorized a technique consisting of the following four questions and mandatory examinee responses:

1. Are you innocent? "YES"
2. Are you guilty? "YES"
3. Are you innocent? "NO"
4. Are you guilty? "NO"

Questions one and two, and questions three and four, each make up a dichotomous set; only one answer in each set can be true and the other answer must be a lie.

Keeler theorized the truthful examinee would show a greater psychophysiological reaction to questions two and three. The truthful examinee would not only be lying to these questions, but would, in essence be confessing to a crime he did not commit.

Keeler believed the deceptive examinee might react in one of two ways:

1. Greater reaction to questions one and four, since they would be denials of wrongdoings, and lies.
2. Great or equal reactions to all four questions; to questions one and four because they are lies, and to questions two and three because here the deceptive examinee is actually confessing to the wrongdoing. In other words, Keeler theorized that inconclusive results, using this dichotomous approach, were indicative of deception.

At a later date polygraphists began experimenting with variations of "yes-no" type techniques. These techniques usually consisted of asking questions after the examinee was instructed to answer all of them "yes". The same questions were then repeated with the examinee being instructed to answer all of them "no". Comparisons were made between the examinee's psychophysiological reactions to the "yes" and "no" responses to each question. This technique had two very apparent weaknesses which led to its extinction:

1. Being instructed to answer "yes" or "no" to a question, even if it was a lie, lacked the psychological impact of an examinee cognitively deciding to offer a deceptive response.

2. The litany of all "yes" or "no" answers afforded the examinee a very good opportunity to disassociate his thoughts from the issue.

In the late fifties or early sixties, a technique known as "The Forced Confession Technique" was developed. Due to the negative connotations of its name, Forced Confession, the technique was renamed the "Comparative Response Technique". This technique requires each question to be

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asked twice during a single chart. The first time a question is asked the examinee is instructed to answer with is alleged truth. After sufficient time to allow for reactions, the question is repeated and the examinee, as previously instructed, answers with an alleged lie. Comparisons are then made between the examinee's psychophysiological reactions to each question's alleged truth and lie answer. If the reactions to the alleged truth is greater than the reaction to the alleged lie the examinee is diagnosed as being deceptive, and visa-versa, regarding that question. For example:

<u>Question</u>	<u>Response</u>	<u>Reaction</u>	<u>Determination</u>
Did you kill John?			
Alleged Truth	No	(Truthful
Alleged Lie	Yes)	
Did you kill John?			
Alleged Truth	No)	Deceptive
Alleged Lie	Yes	(

In 1969 Richard Golden presented a paper on a "Yes-No" technique he attributed to Morton Sinks. Golden's description of the technique was identical to that of the Comparative Response Technique. However, Golden discarded Sinks' method of chart interpretation. Where as Sinks compared the reactions to each alleged truth and lie response, Golden compared the overall reactions in the relevant question sets with the overall reactions to "earlier in life" control question sets. Golden concluded that the technique was as accurate as existing techniques in detecting deception, and more accurate in identifying truthful examinees.

In 1978, Silvestro F. Reali wrote a paper explaining a technique he developed in 1971. This technique is similar to the Sinks and Comparative Response Techniques. Reali completely omitted the "earlier in life" control questions from the test structure, and instructed the examinee to answer each question first with their alleged lie, and then to answer with an alleged truth when the question was repeated.

The Positive Control concept is easy to understand and apply. As in the Reid control concept, the Positive Control concept can be adapted to any technique test structure. The following are examples of existing test structures using the Positive Control concept:

BACKSTER "YOU" PHASE

	Subjective Lie	Subjective Truth
14 C Were you born in the U.S.?	NO	
14 R (Repeat 14 C)		YES
25 C Are you convinced that I will not ask you a question during		

	this test that has not already been reviewed?	NO	
25 R	(Repeat 25 C)		YES
39 C	Do you intend to answer each question truthfully regarding the death of John Doe?	NO	
39 R	(Repeat 39C)		YES
33 C	Did you kill John Doe?	YES	
33 R	(Repeat 33C)		NO
35 C	Regarding the death of John Doe, did you kill him?	YES	
35 R	(Repeat 35C)		NO
26 C	Is there something else you are afraid I will ask you about, even though I told you I would not?	YES	
26 R	(Repeat 26C)		NO

ARTHER KNOWN LIE TEST

1 C	Do you live in the U.S.?	NO	
1 R	(Repeat 1C)		YES
3T C	Did you conspire with Ralph Bald to kill John Doe?	YES	
3T R	(Repeat 3T C)		NO
3K C	Do you know for sure who killed John Doe?	YES	
3K R	(Repeat 3K C)		NO
5 C	Did you kill John Doe?	YES	
5 R	(Repeat 5C)		NO
8 C	Were you present when John Doe was killed?	YES	
8 R	(Repeat 8C)		NO
9 C	Did you shoot John Doe?	YES	
9 R	(Repeat 9C)		NO
11 C	Are you now telling me the entire truth about the death of John Doe?	NO	
11 R	(Repeat 11C)		YES

Each question in the structure is asked twice. The first time the question is asked the examinee is instructed to answer with an alleged lie. When the question is repeated the examinee is instructed to answer

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with the alleged truth. Some examiners, however, instruct the examinee to answer first with the alleged truth and then with the alleged lie. The answers to each question are called the "Subjective Lie" and "Subjective Truth", which together make up a "Control Set" (Reali, 1978). As in the original Sinks Technique, and the Comparative Response Technique, if the psychophysiological reaction to the "subjective lie" is greater than that emitted to the "subjective truth" the examinee is interpreted as truthful to that control set, and visa-versa.

The foundation of the "Positive Control" concept is in the following four principles:

1. The control and relevant question wording in each "control set" is exactly the same, hence, they are balanced.
2. The "earlier in life" control mechanism is no longer artificially produced by the examiner.
3. Stimulation of the control question by the examiner is not necessary.
4. Due to the first three principles, examiner input is minimal, therefore, examiner error in control question wording, stimulation, and introduction is minimal and any difference in the psychophysiological reactions to the "control" or "relevant" question of the "Control Set" is solely due to what threatens the examinee the most: the "subjective lie" or the "subjective truth".

As a theory, Positive Control is easier to comprehend than other existing techniques because its control mechanism is easier to conceptualize. There are generally three psychological theories offered to explain why lie detection works: Classical Conditioning, the Conflict Model, and Psychological Set. Of these three explanations the theory of Psychological Set is the most widely accepted. It holds that a person will "psychologically set", and exhibit the greatest reaction to whatever holds the greatest threat to his general well-being (Backster). In an "earlier in life" control type technique the truthful examinee will be most threatened by the control questions in the test structure and will "psychologically set" there, while the deceptive examinee will be most threatened by the relevant questions and will "psychologically set" there. In Positive Control "psychological set" is related to that which is more threatening in each control set; the subjective lie, or subjective truth. For the truthful subject the subjective lie will be more threatening and they will "psychologically set" there. As in the theory Keeler presented, not only are they lying to this question, but they are also making a statement against their own well being by confessing to a crime they did not commit; in legal terminology, "a statement against interest". For the deceptive examinee the subjective truth is the most threatening and they will "psychological set" there.

Since the wording of the control question (subjective lie) and the relevant question (subjective truth) are exactly the same in Positive Control, many of the problems inherent in other control techniques are either eliminated or neutralized. The examiner is completely relieved of having to properly select, word and introduce the "earlier in life" control

question. All "earlier in life" techniques were designed for use with single issue examinations and have not been validated for multiple issue examinations such as pre-employment tests. The Positive Control technique easily corrects this problem.

Emotional words which are often difficult to eliminate from relevant questions create no problems for Positive Control since the same emotional words also appear in the control question. General nervous tension and outside issues are often completely neutralized. In addition, both the layman and examinee have no problem understanding how "lie detection" works; never again to hear an examinee say, "I refuse to answer any questions which are not directly related to the issue!", as you try to establish a control question.

There are four identifiable inherent weaknesses with the Positive Control technique. If you are going to use the technique effectively you should be aware of them.

The major problem is a tendency for that portion of the control set (the subjective lie or subjective truth), which is asked first, to elicit a listening and/or surprise reaction. In other words, just hearing each question for the first time may elicit a reaction. Therefore, if the examinee is required to give the subjective lie first, there is a tendency for the diagnosis to lean toward truthfulness. If instead the examinee is instructed to answer first with the subjective truth there is a tendency for the diagnosis to lean toward deception.

The second problem that both the subjective lie and subjective truth cause an emotional imbalance for the deceptive examinee. The imbalance is created by the examinee first admitting and then denying the wrongdoing. This is one of the outcomes Keeler predicted in his dichotomous concept. In addition it is possible that the deceptive examinee should give the maximum reaction upon hearing each question in the control set for the first time. This could result in the charts being diagnosed deceptive if the examinee had been instructed to answer first with the subjective truth to each control set. However, it could result in a truthful diagnosis if the deceptive examinee had been instructed to answer each control set with a subjective lie first.

The third problem occurs when one of the control set questions in the structure becomes so threatening that the examinee becomes "psychologically set," and upon hearing that question for the first time produces a maximum reaction, regardless if the first response was to be the subjective lie or subjective truth. This problem occurs most frequently in multi-issue examinations.

The fourth problem involves the very simplicity of the concept itself. Since the examinee understands the basic principles of the concept, he or she may deliberately try to produce a "lie reaction" in the appropriate places (subjective lies). As in the Reid "Yes Test" these countermeasures are apparent and easily recognized by competent examiners.

To correct the first three problems reported the examiner can use two methods. First, administer two charts, one "lie-truth" and the other "truth-lie". This eliminates any "test lean" factor from effecting the

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test outcome. Other writers using Positive Control technique have experienced only one examinee who consistently reacted on each chart to whichever part of the control set was asked first. This resulted in one clearly truthful chart and one clearly deceptive chart. The results were totally inconclusive. Examiners utilizing some earlier in life techniques traditionally would interpret these results as leaning toward truthfulness due to a weak control question. With the Positive Control technique the control and relevant question are identical, therefore, as Keeler suggested with the dichotomous concept, inconclusive results must be viewed as deceptive. In the case cited the examinee was deceptive, and later confessed. Illustration 1A represents control sets two and three of this examinee's test. She had been instructed to answer first with her subjective lie and then with her subjective truth. In control set two the greater reactions occurred in the pneumo and cardio of the subjective lie (2C) rendering an interpretation of truthful. In control set three the greater reactions occurred in the GSR and cardio of the subjective lie (3C), again rendering an interpretation of truthful. Illustration 1B is the second chart of the same examinee with the control sets reversed; she answered first with her subjective truth and then with her subjective lie. As you can see, in control set two the greater reactions now occur in the pneumo, GSR and cardio of the subjective truth (2R) rendering an interpretation of deceptive. In control set three the greatest reactions again occur in all three parameters of the subjective truth (3R) rendering an interpretation of deceptive.

Illustration 2A shows another examinee's chart at control set three, the "did you" question. This was chart one, and the examinee had been instructed to lie first, and then tell the truth. Both 3C and 3R show reactions taking place. However, illustration 2B, chart two of the same examinee, clearly shows deception (greatest reaction to 3R) when he was instructed to answer first with the subject truth and then with the subjective lie.

The examiner may also elect to start off testing with a Silent Test consisting of the questions to be asked in the Positive Control structure. This is extremely effective for multi-issue examinations such as pre-employment tests since it offers the examiner feedback as to whether there are any issues in the structure which are extremely threatening, and to observe what the examinee's tracings look like should he attempt some type of countermeasure. Illustration 3A is a pre-employment examination where the examinee emitted a good reaction in the lower pneumo to question 7 during the silent test. Illustration 3B shows question 7 in the examinee's Positive Control chart. The greater reaction is to the subjective lie (7C). Knowing the examinee reacted to question number 7 in the silent test, which indicated that the question may have been an intense issue for the examinee, the examiner wondered whether the reaction was indicative of truthfulness or if it resulted from hearing a perceived threatening question for the first time. Therefore, the examiner coughed, causing a deliberate distortion, and instructed the examinee that the question would have to be repeated. Illustration 3C shows question 7 being repeated and the clearly deceptive reactions (greatest reactions to 7R) the examinee produced.

Summary

The Positive Control technique is currently being used as a primary technique by several hundred examiners throughout the country. In this paper the writers have attempted to give a complete report of the history, theory, and applicability of Positive Control. Four problems that have been experienced by examiners in the field have been discussed. The causes of and the solutions to these problems have been explained. It is hoped that this paper will stimulate fellow examiners to consider the use of the Positive Control technique as an alternate control method of testing.

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ILLUSTRATION TWO(A)

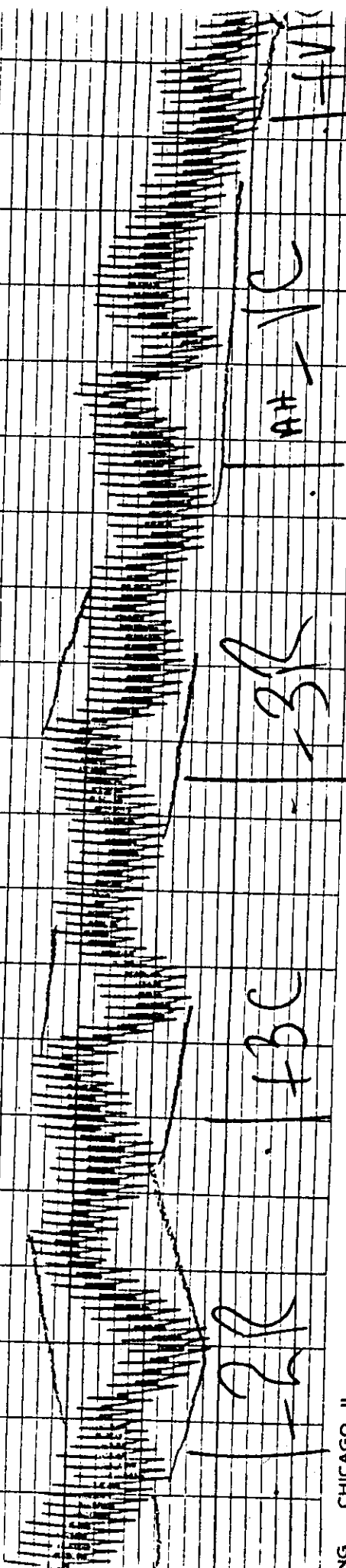
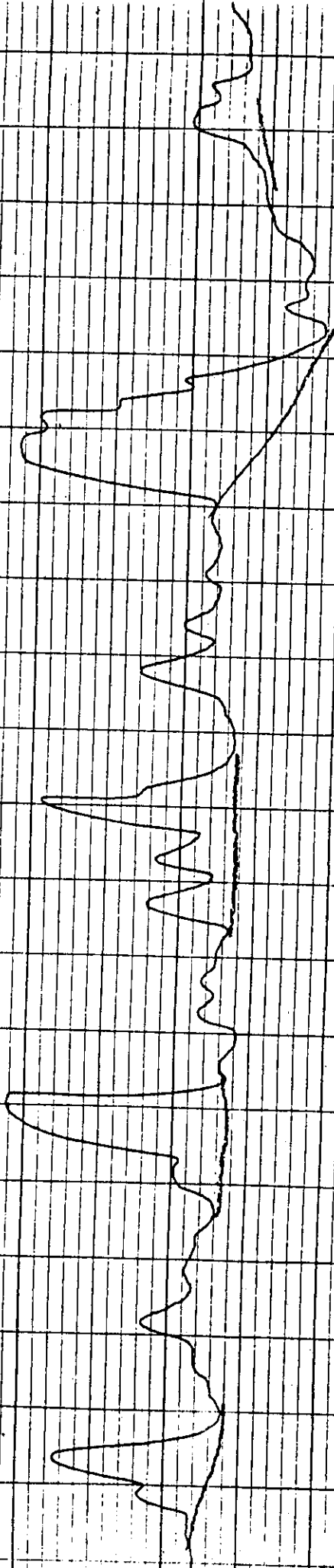
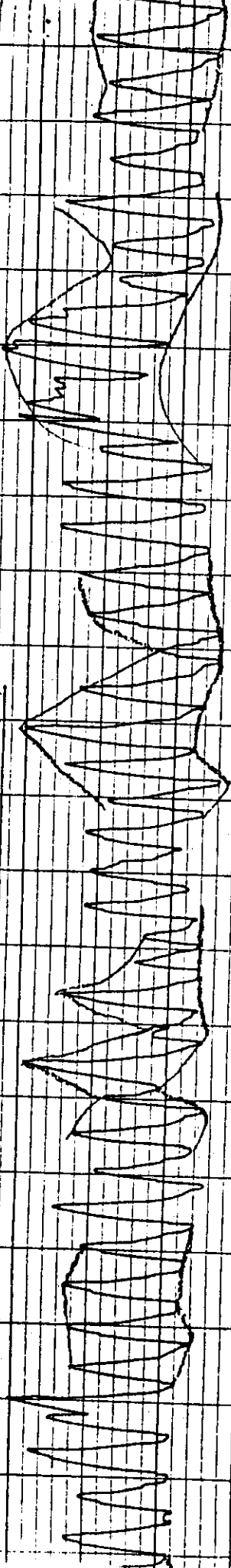
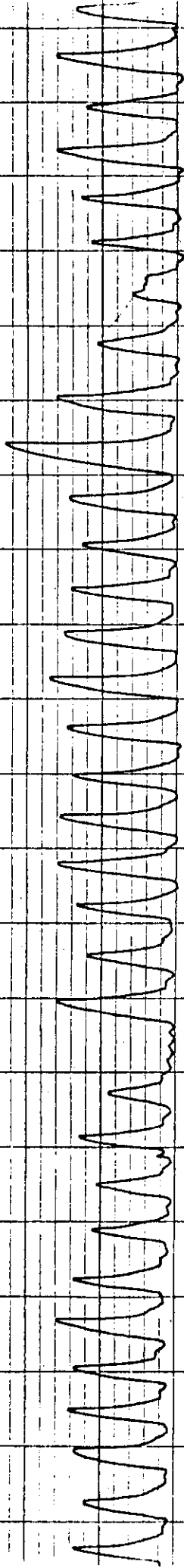
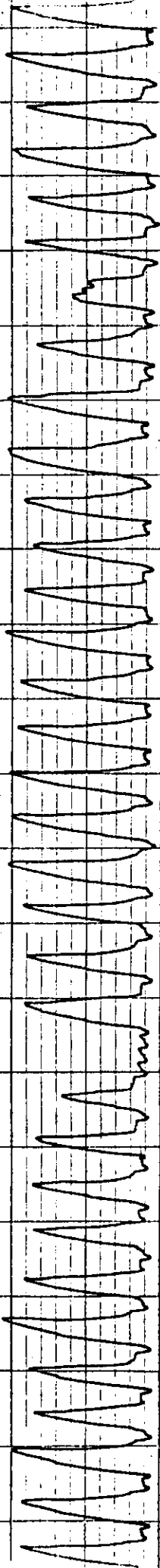
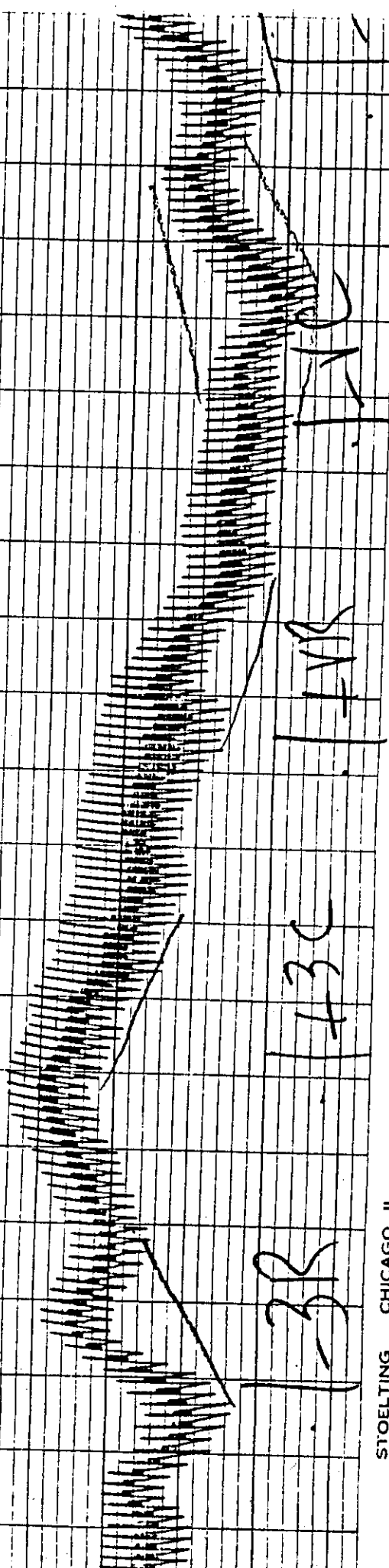
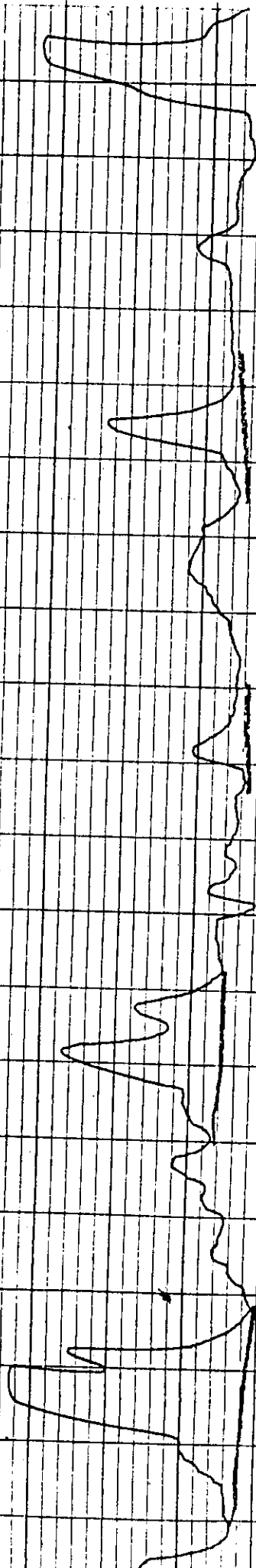
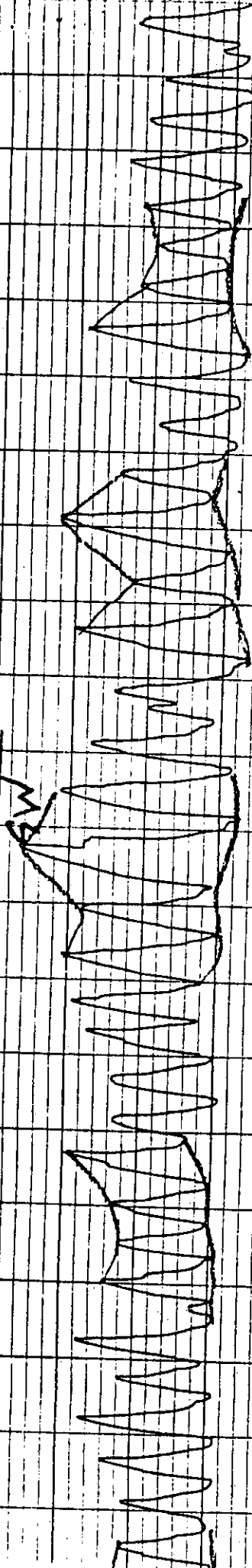


ILLUSTRATION THREE (A)



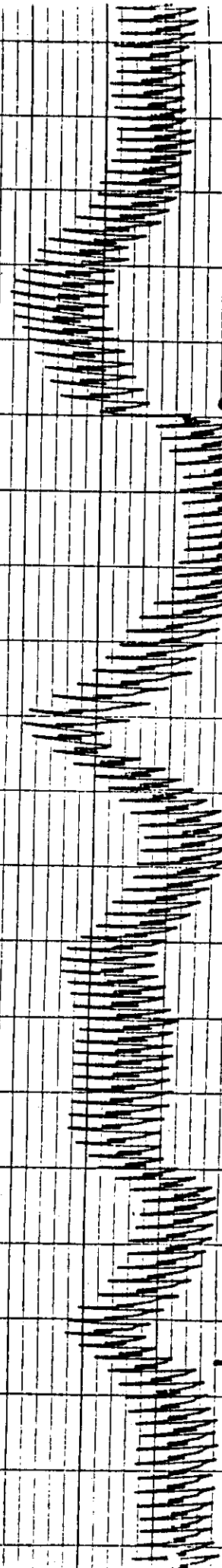
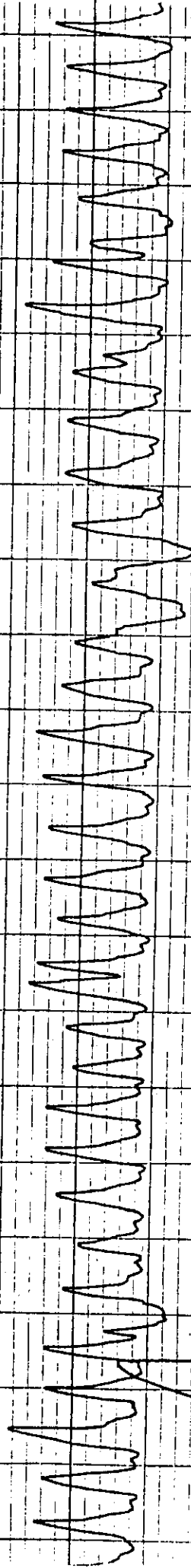
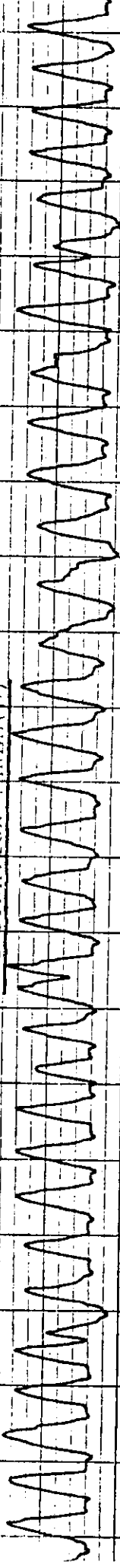
14
 15
 16
 17

ILLUSTRATION TWO (H)



78R

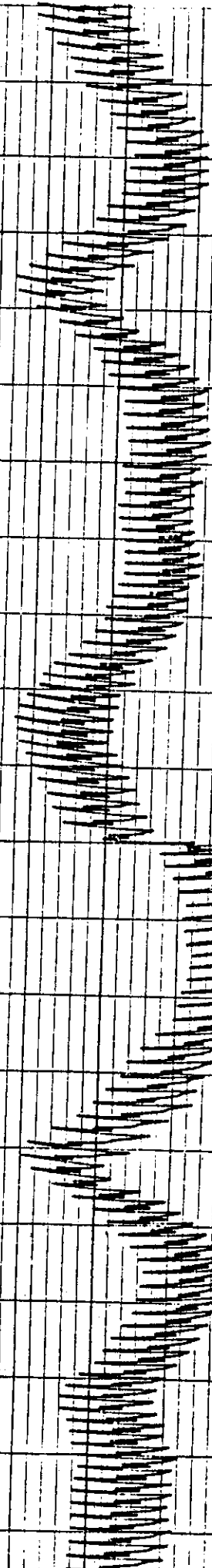
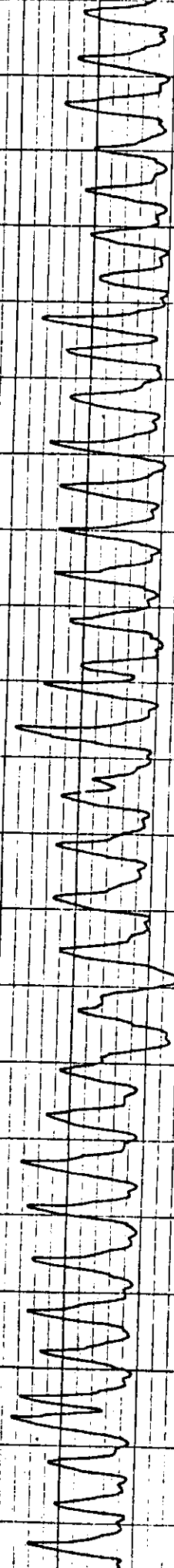
ILLUSTRATION THREE (R)



77C . 78C . 79C . 80C . 81C . 82C . 83C . 84C . 85C . 86C . 87C . 88C . 89C . 90C . 91C . 92C . 93C . 94C . 95C . 96C . 97C . 98C . 99C . 100C

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ILLUSTRATION THREE (C)



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