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Milgram's Experiment: Obedience or Emotional Adaptation on Empathy Emotional Scale?

Krishanu Kumar Das

Department of Medicine, HLG Memorial Hospital, Asansol, India

Email address:
dr.krisdas@yandex.com

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Abstract: This article has given efforts to analyze and interpret one of the most famous psychological experiments, conducted by Stanley Milgram, in the light of understanding of nature and characteristics of emotions. Milgram's famous experiment is actually a series of experiments that started in the summer of 1961, at the Linsly-Chittenden hall of Yale University. This quintessential series of experiments revealed a very significant, yet shocking and unwelcome nature of the human psych. But there is no experimental proof that can explain the true reasons lying behind the results of this experiment. It has been inferred by different authors differently in the course of time. Milgram himself explained this as a fact of obedience in the lattice of the hierarchical social structure. Is it the singular factor? In this project, we will try to interpret it from another angle – that is basic nature and properties of individual emotions and their adaptive processes. We will see not only the matter of obedience, but a variety of factors – namely, magnitude of different emotions, previous adaptational states on different emotional scales, gradual adaptational processes, pressure of conformity to social and cultural norms, obligations coming from individual moral built, and finally genetical compositions of individual persons – all created a bidirectional force having its components acting in opposite directions. And the net product or sum of this bidirectional force ultimately expressed in a person's action and behaviour that was observed in Milgram's experiments.

Keywords: Emotions, Empathy, Emotional Scales, Emotional Adaptation, Obedience, Milgram's Experiment

1. Introduction

In 1961, Stanley Milgram at Yale University conducted a study which is regarded as one of the most famous psychological experiments of all time as well as one of the most shocking and unwelcome revelation of the human nature.

In this study, Milgram showed how an ordinary person under pressure of situational determinants can behave cruelly, and inflict mortal harm to another person. Milgram, being a part of the Jewish culture, as like others, was tormented with the quest for understanding of the cruel and apparently inhuman nature of the actions of Nazi officers engaged in the heinous acts of genocide in World War II [1]. He started his series of experiments at the Linsly-Chittenden Hall of Yale University in the summer of 1961, in pursuit of the query how much the brutality exhibited by the Nazi officers in holocaust was typical to the nature of common people – and intended to further carry on this perusal in future context of German indigenes. But incidentally, he received the results on the local commons so in overwhelming positiveness, he hardly needed any urge to extend his experiments further on German populace.

Milgram's experiment was unique in nature because its outcome went beyond the common boundary of anticipation, and even surpassed those that could be sprouted through the most hard-strained efforts of imagination. His biographer Thomas Blass said, "what made his research so original was his ability to go beyond the visible situational forces and demonstrate the unexpected power of certain invisible features of situations" [1]. Though a lot of concerns were demonstrated thenceforward regarding the ethical standpoint of this experiment, it should be indubitably admitted that this experiment disclosed certain unthinkable frontier of human nature that any previous experiment had ever hardly done.

Afterwards, Milgram's experiment had been replicated many times in different locations and different cultures till they were stopped under the objections arisen out of ethical

concerns. They all revealed similar results with minor variations [2]. Recently, Burger carried out a partial replication of the experiment that also exposed that the trend of the outcome of this experiment has not been changed over time [3].

Milgram conducted 24 variations of his original experimental paradigm (a few were unreported). Among them, experiment 5 (triadic voice feedback experiment) is considered as the basic version of all of his series of experiments [4, 5].

In this well-known experiment (experiment 5), there were three people, one instructor, one teacher, and one learner (who was actually a confederate). The only outsider, on whom the experiment was designed, was the teacher. All participants were male (later Milgram also conducted a study taking all female participants). The participants were aged between 20 and 50, and were selected from a wide range of occupations and educational levels through newspaper advertisement saying – subjects were needed for a scientific experiment on memory and learning, upon payment of $4.5 [6].

The participant having reached the laboratory, both the participant and the confederate were instructed to choose from folded papers to decide their role in the experiment as either the teacher or the learner. Both of the folded papers were written 'teacher' inside. So, the participant was artfully deceived and led to play the role of 'teacher'. The participant was informed that this was going to be an experiment to find out the effects of punishment on the learning process.

Then the learner was strapped to an electric chair in front of the participant. And thereafter, the participant was led to another room and was seated before an electric panel that can deliver different levels of electrical shock to the learner's electric chair. Though the participant and the learner were separated by a wall, they could hear one another. The instructor sat behind the participant. The participant was instructed first to read a number of word pairs; then one by one, on reciting a word, to ask the learner the correct counterword of pair out of four options. With each incorrect answer, the participant was instructed to deliver an electric shock that should start from 15 volts and should increase by 15 volts with each wrong answer. The highest level of shock was 450 volts (Figure 1).

There was no compulsion, the participant could quit at any time in the experiment, and yet could retain their money which was handed over as soon as the participant reached the laboratory. The experiment was supposed to be terminated, either if the participant wished to quit before the final end, or otherwise after three successive deliveries of 450-volt shocks at final end.

At each step while increasing the level of shock, if the participant hesitated or showed mental distress to proceed further, there were four precogitated prods to be uttered by the instructor in the following order:

1) Please *continue*.

2) The experiment requires that you *continue*.

3) It is absolutely essential that you *continue*.

4) You have no other choice; you *must* go on.

If after the fourth or final prod the participant wished to quit, the experiment was supposed to be terminated.

Results: It was revealed in the experiment (experiment 5) that 65% of the participants went to the final step, against pre-polled speculation of less than 1-2% by groups of selected psychiatrists and other individuals [4].

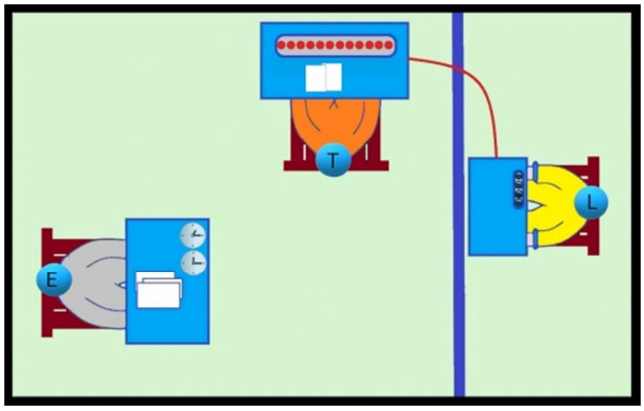

Figure 1. *Milgram's Experiment (L = Learner; T = Teacher; E = Experimenter).*

Interpretation of The Results of Milgram's Experiment

According to Milgram, the subjects, through signing the contract to become a part of the experiment, entered into an agentic state [4]. The agentic state of a person in a society is influenced by the milieu or lattice of our social structure which is often based upon a hierarchical form. This hierarchical form of the society is internalized by the individuals living in that society throughout their raising since birth – going first through family and then through school and other institutional modulators. These past antecedent modulations of a subject's mental constitution, influenced and guided by various situational determinants, often enforces and encourages them to immerse into a typical agentic state casting off their individual independence of actions and behaviours.

In the agentic state created by this experiment, the experimenter claimed an authoritative power to which obedience was usually automatic and socially accredited. Signing the contract and pledging to help the experimenter for the sake of science further bound the subjects to that state where they lost the liberty to act upon their own, and where breaking off from the allegiance was considered socially disapproved and supposed to confer shame and discredit upon the subjects.

Within this ambience, even if the subjects felt their own intentions and mental tendencies were going against the proceedings of the experiment, yet they found it difficult to get them out of the situation, and continued to carry out the experimenter's commands.

Disobedience only emerged when the force of this personal strain, arising out of the conflict between the individual's own intentions or mental tendencies and the experiment's demands, outweighed the binding factors that had been keeping them submerged into that agentic state.

Other explanations for the outcome of the experiment include conformity with the request of the experimenter, and yielding to the 'foot in the door technique' [7-8]. When the subjects were complying with the small requests of the experimenter to give low doses of shocks, at the same instant, they were also synchronically giving way to conforming and considering themselves as the type of persons behaving that way. So, when they reached to the positions demanding of delivering larger voltage shocks, they felt less cognitive dissonance as they had been already accustomed to it.

However, Milgram excluded conformity as a possible reason of the result as mutually countervailing demands, both from the experimenter and from the learner, to conform in favour of them in the experiment actually nullified or zeroed its effect [4]. But it depended also on the closeness of the persons in the experiment. In experiment 5, the subject and the experimenter were in the same room whereas the learner was in the other room; but in experiments, where the subject and the learner were in the same room, the obedience to the experimenter certainly fell.

2. A New Angle to Analyze and Explain Milgram's Experiment

In this article, we will put an effort to reinterpret the results of Milgram's experiments on the ground of understanding the basic nature and the properties of emotions.

'Emotion' could be defined as "a specific sensation or feeling in the mind that provides directional drive to the other faculties of the mind – memory, intelligence, and physical activities – for their actions to be performed to pursue a specific goal" [9].

According to 'emotion theory' [9, 10], there is no existence of any distinction between primary and secondary emotions. Though many of the researchers are in favour of the concept of primary and secondary emotions, like primary and secondary colours [11-15], the concepts of primary and secondary emotions are not supported by all [10, 16-17]. Present study supports all emotions are distinct and different anatomically, though they maintain common mechanisms of physiological action. And they all could be distinguished and determined both qualitatively and quantitatively along with their respective emotional scales. These emotional scales figuratively represent the different emotions' magnitude or capability to expand in intensities. But emotions vary in their magnitudes or expanse of emotional scales in different individuals and in different species in accordance with their importance as they have been developed in the course of evolution.

The species get all the emotions as genetical heritage. But the objects or situations responsible for provoking or inducing emotions are all had to be conditioned through the learning processes across the life.

2.1. Emotion Theory

Every emotion can be represented on 'pleasure and pain' scale, as illustrated in 'Emotion Model' posited by Das, maintaining their adaptive range or AR on a certain location on the emotion scale, which is responsible for different emotional sensations with the similar emotional stimuli in different persons, and even in the same person when the position of adaptive range has been shifted [9, 10]. So, all emotions have two ends, one 'pleasure' or 'satiety' or 'positive' end, and another 'pain' or 'non-satiety' or 'negative' end. This is true for emotions like 'fear', 'anger' also, which are commonly considered as negative emotions. 'Fear' has its opposite end 'courage' or 'valour'; 'anger' has its opposite end 'revenge satisfaction' (Figure 2).

Figure 2. *Emotional Scale, AP = Adaptive Point, AR = Adaptive Range.*

A person only feels an emotion when certain stimulus evokes response on a point in emotional scale, away from adaptive range either positiveward or negativeward. A person will feel a favourable or pleasurable sense when this induction is on the positive side of the emotional scale, and an unfavorable or unpleasant sense when this induction is on the negative side of the emotional scale with respect to adaptive range; not with respect to midpoint of the emotional scale in either cases (Figure 3).

Figure 3. *This stimulus will evoke positive or pleasurable sensation.*

When a stimulus induces within the adaptive range on the emotional scale, the person will not feel any kind of sensations.

Adaptive point (AP) and adaptive range (AR) are not fixed in an individual for any emotion. It depends on how we are compromising with our surrounding environment (Figure 4). It also depends on past unneutralized emotional memories. For details see emotion model [9, 10]. For that, same emotional stimulus can bring different sensations in same individual, even pleasurable at one time and unpleasurable at another time, depending on the position of the adaptive range (AR).

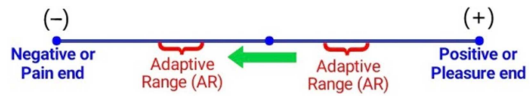

Figure 4. *Adaptive Range (AR) is being shifted to adapt with the surrounding environment.*

This model is applicable to our bodily perceptions also, like perceptions of vision, audition, pressure, temperature, etc. Whether an object of 25°C will seem hot or cold that depends on what temperature the person is adapted in, that is the

temperature of his surrounding environment; the same temperature may seem to him hot at one time and cold at another time. In case of vision, we see everything by relative judgement with respect to adaptive range, for that when we come from bright light to darkness, everything appears to be black. It requires time for the shifting of adaptive range, with respect of which we see everything more prominent. But in case of vision and audition, the adaptive range is very narrow, almost closer to adaptive point.

However, the difference between emotional perceptions and bodily perceptions is that in case of adaptations of bodily perceptions, the adaptive range (AR) has a central tendency whereas in case emotional adaptations, the AR has a tendency to move from negative to positive direction. But we do not know and I also doubt whether emotional perceptions too have a central tendency or not. The reason is too much upjugated or extremely happy[1] person may seek ways to be a little subjugated; and may engage in jobs or activities to deteriorate his mental status.

2.2. The Emotion Empathy

In this article, we will consider a particular emotion 'empathy'. Empathy means mental affections of the owner of this emotion, after realizing others' physical or mental sufferings. Like, we get twinges of distress and agonies watching someone being tortured before us. Though 'empathy', for years in literature, has been partitioned into its cognitive and emotional compartments [18]; under this heading, we will discuss only emotional empathy, or more precisely the emotion 'empathy', because later we will see cognition is only one of the processes of induction of emotions (see under heading 'emotional induction').

For what purpose, this emotion was evolved?

Though that is not the subject of this article, we consider that it evolved to be keeping with the needs of group struggle.

In my previous article [19], I cited that 'love' is the single most emotion, the benefit of which is targeted towards the recipient or object of the emotion, rather than owner of the emotion. Single most means the most important emotion that helped in group struggle. But there are some other emotions also, like 'empathy', 'pity', the benefits of which may also be targeted to the objects of the emotions.

And these all have helped in conjoined, cooperative activities of the members of a group of a species to fight against enemies and adversities, where win or existence through individual struggle was not possible.

Now, if we draw 'empathy' emotion scale, there is obviously two ends of the scale – one positive and one negative. Towards the negative end, the subjects suffer from more pangs of pain watching someone being suffered. And towards the positive end, the subject perceives no feelings of pain, instead derives sadistic[2] pleasure from someone's sufferings.

[Note: Here the positive and negative ends have been designated on the basis of favourable and unfavourable feelings experienced by the subjects. No account of moral righteousness is being considered here.]

So, a cruel or sadistic person may seem to be unfavorable to others, but the owner of the emotion is experiencing the emotion on the positive side of the scale.

Now, where the adaptive point will lie on this emotion scale for a person – that will depend on the person's being adapted to the coexisting situations. In my observation, I have seen people so empathetic that they would not even cut a small fish's throat, and also people who can inflict mortal injuries to human without showing any agitation. It does not mean that by nature, the former is a kind person and the latter is a cruel person, or the former is a good person and the latter is a bad person. It depends on their situational demands for adaptation on a particular emotion scale. Not all butchers are cruel in nature. Soldiers kill their opponents in war-field not out of their common character of brutality. Romans used to exhibit gladiators' fightings and fightings between man and animals, where most of the time one fighter was killed. This type of exhibitions makes the common people of the nation stronger and less empathetic. In different other cultures, there are types of sacrifices (either animals or humans) and similar rituals.

Now the 'empathy' emotional scale can be drawn like following (Figure 5):

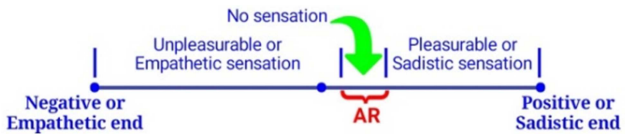

Figure 5. *Empathy Emotional Scale.*

Wherever the adaptive range (AR) may be settled on the subject's this emotional scale, if any emotional stimulus elicits response on the positive side of the AR (not midpoint) on the emotional scale, it will bring pleasurable or sadistic sensation to the subject's mind, and if it elicits response on the negative side of the AR on the emotional scale, it will bring unpleasurable or empathetic sensation to his mind. If it elicits response within the adaptive range (AR), it will bring no sensation, neither pleasurable nor unpleasurable, to the subject's mind.

There are plenty of past incidents that bear evidences of sadistic pleasure in hurting, torturing, and killing others. We also experienced great empathetic deeds (e.g., works of Mother Teresa, Florence Nightingale). But are there any evidence that asserted shifting of AR (adaptive range) on one's empathetic emotional scale, that changed the person's disposition of from sympathetic to sadistic nature or vice versa towards a particular situation?

i. The psychologist Ervin Staub described a story of a Vietnam veteran regarding his feelings about killing in

1 # The more positive adaptation will occur on an emotional scale, the more will the person be satisfied or happier regarding that emotion.

2 # Here 'sadism' means – to derive pleasure from sufferings (both physical and mental) of others. It is the opposite extremity of emotion 'empathy'; and must not be confused with 'sexual sadism', which is a stimulus for arousal of emotion 'sex'.

war (derived from personal interview by Seymour Epstein) – "*Flying over a group of civilians in a helicopter, he was ordered to fire at them, an order he did not obey. The helicopter circled over the area and again he was ordered to fire, which again he did not do. The officer in charge then threatened him with court-martial, which led him to fire the next time around. He vomited, felt profoundly distressed. The veteran reported that in a fairly short time firing at civilians became like an experience at a target-shooting gallery, and he began to enjoy it.*" [21]

ii. Waller mentioned a self-declaration from an army commando (derived from encyclopedia of genocides; edited by Israel Charny) – "*As time passed I felt better and better. I fell in love with the idea [of killing]. I felt like a king. Strong. The best. ... Before military service I would not raise a hand to a person, and my service made violence my second nature.*" [22]

iii. In Philip Zimbardo's Stanford prison experiment, when role-playing guards of normal mentality were given scope and opportunity, adaptation on emotional scale also rendered them to gain changed attitude facilitating sadistic activities towards the prisoners. But in this case, positive adaptation occurred on other emotion scales also. They became dominant, authoritarian, overbearing and arrogant. Those are due to positive adaptations on 'anger', 'fear' emotional scales. In another example, Zimbardo described the story of Lieutenant Alexander Nininger engaged in fighting during World War II's infamous battle of Bataan – "*This twenty-three-year-old West Point graduate volunteered to go hunting for Japanese snipers where the fighting was most intense. With grenades, a rifle, submachine gun, and bayonet, Nininger killed many Japanese soldiers single-handedly in intense close combat, and kept fighting although repeatedly wounded. ... This quiet, sensitive, intellectual young man had gone on record as saying that he could never kill anyone out of hatred. ... In his review of personality testing, the author Malcolm Gladwell surmises that Nininger's file might be as thick as a phone book, but "his file will tell us little about the one thing we're most interested in. For that, we have to join him in the jungles of Bataan.*"" [23]

2.3. Explanation of Milgram's Experiment on the Basis of Emotion Theory

In Milgram's experiments, what mysterious things happened in the laboratory within the subjects' mind were gradual adaptations on different emotional scales, most importantly on the emotion 'empathy'.

A person will feel less emotional stress watching others being suffered for two reasons. One is – the person does not have this emotion or have this emotion in very low gradient, that is Emotional Quotient for this 'empathy' emotion E_eQ is very low (Ref. 9: see chapter 2 "IQ, EQ, MQ, and PQ"). Another reason is that the person possesses this emotion in normal range of gradient, but he is adapted to a negativeward point on this emotional scale.

The first reason is subjective, and we will discuss about it later.

If we consider the second reason, then we think that in Milgram's experiments, there happened gradual adaptation on the 'empathy' emotional scale. The person being experimented was not exposed to the sudden ultimate level of empathy provoking situation at the first place. He was being directed there step by step.

If someone comes from complete darkness to sudden bright day light, he would feel distress, but if light intensity increases slowly, he wouldn't be even fully aware when there will be bright lights around.

So, the participant, without being much aware of being adapted (though many participants showed signs of adaptation, or mental stress to cope with it at varying degrees in different steps that were recorded as sweating, trembling, nervous laughter, etc.), he would let his activities go on. When later the participant would be readapted after coming back to his normal coexisting life situation, he would feel distress for his previous activity if not debriefed after the experiment; and even if debriefed, would wonder how he could do this.

3. How Obedience Is Related to Milgram's Experiment

Obedient behaviour, as Milgram stated, "… is initiated in the context of a hierarchical social structure and has as its outcome the differentiation of behaviour between superior and subordinate" [4]. Considering the evolutionary aspect of this behaviour, it had been necessitated when man constructed its primitive society based on division of labours. They developed a society in the form of an organization where different elements of the organization vowed to live by working on through the principles of symbiosis that carried ultimately the greatest benefit to that organization [19]. In this respect, I would prefer to say 'different elements' rather than 'superior and inferior elements', as it could be bidirectional – like the mob fears police, but also in situations the police can fear mob; the subjects fear the ruler, but also in situations the ruler can fear his subjects. The society becomes stable, when its most elements harmonically accept the force of obedience on its principles and boundaries.

Now, obedience comes from two perspectives of forces – (A) one from subjugation on 'fear' emotion scale (mostly, but other emotional scales may also be involved); (B) another out of social obligation and moral principles.

(A) A man or animal can be obedient to their masters when they are subjugated on most importantly 'fear' emotion scale. Obedience may also come from prospectively on subjugation on 'hunger' and other different emotional scales. Proverb goes, 'hunger can tame a lion'.

In human society, most of the obedience in general population to the authorities comes from prospectively on

subjugation on 'fear' emotional scale. We obey policemen, lawyers, judges, influential political leaders, government authorities, or even gangsters out of 'fear'. This type of subjugation is helpful in building social integrity and in smooth execution of social functionings, except those which are exerted by the evil categories.

The 'fear' provoking memories are all integrated and embedded as associative memories in our brains. And when there occur similar situations, the recall of these memories elicits response on negative side of the emotional scale, and that ultimately binds us to obey. Bickman showed a man in uniform can evoke more obedience in others than any other ordinarily dressed person [24]. In his experiment, a subject was asked to pick up a paper bag, give a dime to a stranger in need, and stay away from a bus stand by a man dressed as a civilian, a milkman, and a guard. Results revealed 19% of the subjects obeyed to civilian, 14% of Ss obeyed to milkman, and 38% Ss obeyed to the guard. In another experiment, he disclosed that even the situation of surveillance (where in non-surveillance condition, commanders left after the request) had no effect on the outcome of the experiment, concluding neither rewards nor coercive forces could be the reason of this variance. Lefkowitz and his colleagues conducted a study, where a pedestrian violated a prohibition of traffic rules more often when another person (actually a collaborator) also violated the prohibition. They noticed the rate of violations by the subjects was significantly greater when the collaborator was dressed as a person of higher social status (i.e., wearing a suit) [25]. So, a man in uniform, or even wearing a suit, can evoke more obedience in others because it resembles our other associated memories – like policemen in uniforms, lawyers in uniforms, judges in uniforms, military personnel in uniforms – that will instantly educe response on our 'fear' emotional scales.

In Milgram's experiments, the experimenter was not linked to any previously associated 'fear' provoking memory within the subject's (teacher's) mind. But he was dressed in a gray lab coat and looked like an authoritative figure. The experiment was also conducted in a prestigious institution. That helped to induce 'obedience' in subject's mind by arousing similar associated memories, that is obedience to institution and institutional authorities as in schools, colleges, universities, other socially legitimate institutions, and even in work place. But this force of 'obedience' in experiment was weaker than that in real life, as the subjects were constantly aware of the fact that they were not under this authority and it could not do any harm if they were to quit.

Milgram showed in subsequent variations of his experiment that obedience to follow orders to the final end of the experiment significantly dropped when the power of the authority was reduced to different levels by virtue of closeness of and surveillance by the acting authority [4, 5].

In experiment 5, the experimenter sat just a few feet away from the subject. In a second variation, the experimenter, after giving initial instructions, left the laboratory and gave his orders by telephone. And in a third variation, the experimenter never met the subject, but his instructions were recorded on a tape-recorder that was played when the subject entered the laboratory.

Results revealed that out of 40, where 26 in the 1st condition were fully obedient, only 9 showed full obedience in 2nd condition (Figure 6); and there was further significant drop in 3rd condition where the subject had to never meet face to face the experimenter (for technical difficulties data could not be provided).

In another condition when the experimenter gave orders through telephone, he reappeared in the laboratory after the subject refused to give higher levels of shock. In that condition, the experimenter frequently forced the subjects to go further in the experiment.

Not only that, whenever the experimenter was absent in the laboratory, a number of subjects displayed a queer behaviour. They gave lower levels of shocks when they were supposed to give higher levels. This absolutely signifies the effects of fearful authoritative power (acting on 'fear' emotional scale), as the normal trends of behaviours of the subjects were different against their actual acts. In experiment 15, when the power of authority was completely nullified by two experimenters contradicting each other on continuation and discontinuation of the experiment, not a single subject went to give the highest level of shocks.

In another variation of his experiment (Experiment 10), Milgram organized the experiment in an ordinary office with minimal furniture at Bridgeport to evade the effects of authoritative air of the laboratory of a prestigious university. Participants were also conveyed that the research was being conducted by a private organization (Research Associates of Bridgeport) of unknown character. In that experiment, the subjects who followed to final step were numbered 19 (against 26 in university lab) out of 40 ($\chi^2 = 2.489$, $p = 0.1147$). This decline supports the effects of formidable atmosphere of university laboratory on the participants. But in this case, the condition also reduced the credibility of the scientific experiment to some extent (in respect of how far the experiment is good for science and society). Change of experimenter from 'of hard disposition' to 'of soft disposition' compared to victim also reduced the obedience rate from 65% to 50%; $\chi^2 = 1.841$, $p = 0.1748$ (Experiment 6).

Another important issuing factor for eliciting 'fear' is ignorance. When the mind is ignorant and less educated, it fears more and more gives way or yields to social norms and legitimate authority. When the mind is well educated and enlightened, it fears less and less yields to social norms as well as exhibit less irrational obedience to legitimate authority. In the latter case, if obedience engenders, that comes from personal principles, but not from fear. In Milgram's experiments, experimenter was a legitimate authority by its claims, but not the learner. In a letter to NSF, Milgram observed, "70% of those who had not gone to high school obeyed fully, while this is true of only 30% of the persons who had completed graduate or professional schools" [26].

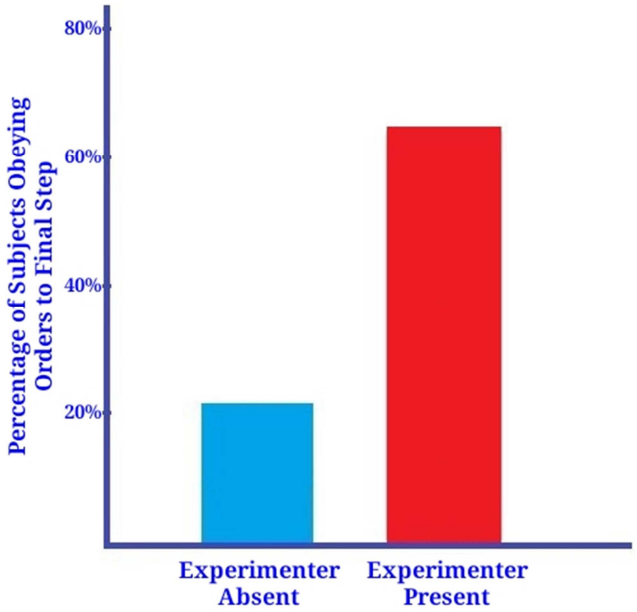

Figure 6. *Obedience influenced by the power of the authority. ($\chi^2 = 14.679$, $p = 0.0001$).*

All these suggest that the strength of authoritative power elicited by the presence, legitimacy, and disposition of the experimenter as well as air of the surrounding atmosphere undoubtedly affected the subjects' obedience, as when this power weakened, the disobedience rate increased. And this power produced justifiable emotional stimuli acting on the emotional scale of 'fear' in subject's mind that made other emotional adaptational processes run smoothly also.

(B) The second form of obedience comes from (i) social and cultural norms, and (ii) moral principles. 'I should obey a policeman because I afear him' – this is true. Again, 'I should obey a policeman because it is good to obey him to keep law and order' – it is also true.

(i) Obedience that comes from social and cultural norms primarily is the product of 'fear'. Here 'fear' is evoked by the thinking of being socially rejected or isolated by others.

Social and cultural norms can influence a person's behaviour in a variety of social contexts [27]. Evidence includes researches conducted by – Kallgren et al. on littering [28], Schultz on recycling [29], Kahan on tax evasion [30], Nolan et al. on energy conservation [31].

Pressure of conformity comes mainly from 'fear of isolation and rejection', though other emotional scales like 'shame or embarrassment' could also be involved.

Now this 'isolation or rejection' from what? It could be the entire society or nation, any particular group (like a club, school, neighborhood, etc.), or any particular person (like an office staff has to conform and comply with the likings and dislikings of the manager or boss). When it involves the entire society or a people of a particular culture, that engenders social and cultural norms.

When an individual contemplates what painful experiences (there are a whole range of things) could be brought about by 'social isolation and rejection', that immediately elicits fearful response on his 'fear' emotional scale. And if it is on the negative side of the scale (it happens in majority of cases, because social rejection does not usually make a person anticipate to receive pleasurable experiences), that emotional arousal would press him to conform to the behaviour, on disobeying which, the question of rejection was aroused from. If it elicits response on the positive side of the scale, he would give way to the opposite or counter-behaviour.

For example, if 'littering' makes a person socially rejected and it elicits response on negative side of 'fear' scale, the person would stop littering. But if it elicits response on positive side of any emotional scale, that means the person would be pleased to be isolated, then he would continue to litter. In my experience, there are instances when someone in purpose of getting isolated from a group or proclaiming DND (do not disturb), had practiced such behaviors that would make that group angry and isolate him.

Yet when a negative or positive response is occurring on a particular emotional scale, how much the individual would conform to the favourable behaviour, and how much the individual would go against and either win or adapt on his emotional scale, that depends on balancement of both stands considering other various aspects of emotional adjustments. This is an elaborate discussion; I will refrain from it in this article. In nutshell, if the individual conforms to the favourable behaviour, there would be no displacement of AR on his that particular emotional scale. But if he doesn't or go against it, he would have to either win or adapt on his that emotional scale. In case of adaptation, there will be displacement of AR; in case of winning, there may not be any displacement or may be partial displacement of AR depending upon the percentage of winning (for details, see ref. 9, 10).

Conformity can also occur from motivation to gain or achieve a social space. Here, though there is no direct group pressure, yet indirectly the conformer is induced by the society to partake an identification that would enable him to play for a meaningful productive social role and satisfy life's basic needs.

Another reason that has been proposed for conformity is people's informational motivation which is based on the 'desire to form an accurate interpretation of reality and behave correctly' [32, 27]. This conformity depends on subject's level of confidence and specifically operates when the individual is unsure about something or ambiguous in a situation. Deutsch and Gerard explained that normative and informational conformity can overlap on each other. And truly speaking, here also 'the fear of isolation and rejection' operates subconsciously from the conception of 'being unfit and unsuitable'.

Additionally, it should be mentioned that when we are not sure or do not know what and how to do things in a particular situation, through our cleverness, we often watch what or how other people are doing those things. And this is not conformity taking the definition of conformity as '*yielding to group pressures*' [33, 34]. For example, I rode an airbus of a new model and did not know how to adjust the seat. Cleverly, without proclaiming my ignorance, I would watch how other

people are doing those. Another example: someone said "don't eat olives, it may cause cancer", and I stopped eating olives. Here, the reason is - if his statement is true the effect of eating olives on my health is enormous. But I do not have enough knowledge to prove that his statement is entirely false. Here fear is arising from my ignorance, and my action is not against my knowledge, intention, and rational thinking, to yield to group pressures. So, this is also not conformity. Even if the statement comes from a number of people, the rationale remains the same.

Not all the time, all these are settled upon conscious logical analysis and thinking, more often they are rested on 'heuristics' – that is "a mental shortcut that allows people to solve problems and make judgements quickly and efficiently". But as I described in my earlier literature, heuristics or intuitions are just our subconscious' quick processing of same logical processes that is conducted by our conscious mind [9]. Difference is that the latter is more elaborate and slow, whereas the former is fast, summarized, and reflexive, and operates without the need for making our selves fully aware of it.

(ii) Another perspective of force of obedience is a person's moral principles. A person's moral principles are constituted by parental teachings (most important), school or institutional teachings, teachings by other mentors, person's education, and learning through analyzing previous experiences.

They are gradually developed as a man matures, and take a near complete shape after a certain age; though a person's moral structure is amenable to change at any age. But older a person is, the more momentum of causal experience is needed for that change.

This moral structure, which in psychoanalytic language is equivalent to 'superego', is developed and processed through various emotional experiences throughout the life. 'Reward and Punishment' is a gross term for it; the actual process is more complex and involves various emotional adjustments – somewhere to compromise, somewhere to gain – to secure the maximum emotional benefit out of life. For example, one may think – "to satisfy my 'hunger' emotion if I have to be subjugated a little on 'fear' emotion scale to my employer, I will accept it. Every staff fears a little bit their boss".

From this point of view, the subjects may follow the orders of the experimenter as they thought it was good for the science as well as good for the society. This morality has been established on the experience that what is good for the society is good for them also, and what is not, is also not good for them. Yet, the power of this principle was not very strong in the experiment as the subjects were not informed about how much helpful that experiment was to promote future advancement of science to procure social good. And there were past examples of scientific researches criticized for unethical cruelty on animals and humans.

Now, what were the role of prods? Did they augment the 'fear' provoking stimulus on the subjects?

Haslam and his colleagues argued that subjects obeyed more when the prods were more compatible with urges for social and scientific identification of the subjects with the experiment, rather than with enforcement of authoritative power. They urged that the subjects in the experiment were more inclined to follow the scientific goals and accordingly desires of the conducting experimenter in an engaged followership manner, and did not just give in to the orders of the authority.

Now, if we consider the prods one by one, there were four predetermined prods in fixed sequential order – (1) Please *continue*. (2) The experiment requires that you *continue*. (3) It is absolutely essential that you *continue*. (4) You have no other choice; you *must* go on.

The first prod is a simple formal request. But the second and third prods obviously are urges to the subjects to go with their social and scientific identification with the project. Saying for the fourth prod, it does not anymore adhere to the social and scientific appeals. It is more like an authoritative order.

In an experimental analogue [35], Haslam and his colleagues showed that the participants in experiment were more willing to obey the experimenter's orders if the second prod was applied, and that seemed to favour the 'engaged followership' model of obedience.

In the partially replicated experiment, Burger noted that all participants had quit after the fourth prod [3, 36]. It could be due to the fact that the fourth prod reminded the subjects that they were being deceived as there was no right to elicit authoritative power on them as per initial agreement. So, they vehemently resisted to obey that order. Therefore, the presence and disposition of the experimenter as well as the air of the environment was more eligible to implicitly produce a formidable authoritative influence on the subjects than that when it came as a verbal order. But this is just an assumption. It could be also true that the subjects in that experiment at that time (that was the time of delivery of the fourth prod) already reached their breaking points.

There were two more additional prods designated to deliver against the queries and concerns of the subjects – one is '*although the shocks may be painful, there is no permanent tissue damage, so please go on*', and another is '*whether the learner likes it or not, you must go on until he has learned all the word pairs correctly, so please go on*'.

The first of them reduced the power of the empathetic emotional stimulus as the subjects got assured that no permanent damage would be rendered to the victim. So, it would enable the subjects to carry on further. But the second prod was like an authoritative order, it was more like the fourth of the previously mentioned prods.

Now, 'Engaged followership', in a broader concept, is a reflection of 'group psychology'.[3] Though its validity cannot be altogether ruled out, its scope is limited in case of short expanses of the experiments of Milgram. However, 'engaged followership' cannot explain the peculiar nature of the participants in Milgram's experiments where experimenter was absent – that is giving lower levels of shocks when they

3 # How 'group psychology' is nurtured by individual emotions? For that see ref. 19.

were unobserved and supposed to deliver higher levels of it. And it also cannot explain post-experimental laments stated later in this article.

So, to conclude, both of the above-mentioned perspectives of 'obedience' – (1) affective stimulus on fear emotional scale, and (2) pressure of obligation from social norms and moral principles – were operating to create their effects on the minds of the subjects of Milgram's experiments to make them obedient.

The force of 'obedience' helped in other ways also. It delivered a gentle push to the smooth adaptational process on 'empathy' emotional scale. Otherwise, the subject being ambivalent, the adaptation process would have been stopped earlier. It could be evidenced in the frequent excuses of the participants in post-experimental interviews – *'you told me to do so'* [4, 37]. So, though the power of authority exerted by the experimenter on subject's mind was not so great to be the single factor to produce the unexpected outcome of the experiment, yet it had been very important in that sense that it helped in smooth progression of emotional adaptational process on 'empathy' emotional scale.

However, besides 'the law of obedience', there were other important governing factors to determine the destination of the experiments, as described below.

4. Other Influencing Factors Associated with Milgram's Experiment

4.1. Emotional Induction

Emotional induction depends on conditioned memories aroused by both of our 'direct experience through senses' and 'cognition'.

'Direct experience through senses' arouses conditioned memories for induction of particular emotions, whereas 'cognition' leads us to make an assumption which, by turn, induces associated conditioned memories that ultimately act as stimuli for emotional arousal. So, observing 'someone is being tortured' and thinking that 'someone is being tortured' are not the same from the perspective of emotional induction.

I must not say that cognition induced response is always weaker than that is induced through direct senses. Because sometimes cognition overestimates the consequence. We may fear something greatly in advance, but ultimately it may be exposed that it is not that much fearsome at all.

Some emotions also have additional perceptional features (that are not induced by conditioned memories or conscious cognition), e.g., hunger, sex, and love [10, 19, 20]. We feel hungry when blood level of glucose, amino acids, and other nutrients fall and that is detected by the hypothalamic receptors. We feel also hungry by thinking of food. We get sexually aroused by stimulation of glans penis or glans clitoris. We get also aroused by sexually provoking thoughts. Pressing any object, even inanimate, to the breast, someone would feel a sensation of 'love'. So, there are peripheral receptors or sensory nerve endings that are directly connected to the emotional centers of 'love' and 'sex'.

Now, in Milgram's experiment, the inflicted electrical shock, whether it is 225°V or 450°V, was not that much important. What important was how strong the empathetic stimulus was (induced either through cognition or by experiencing through direct senses, i.e., vision, audition, touch, etc.) to evoke a response on 'empathy' emotional scale.

The stronger the empathetic stimulus is, the far will be the location of the stimulation point towards the negative end on the emotional scale, and greater adaptation will be needed if the subject has to coexist with the situation. The nature and intensity of the perception of the emotion depends upon the location of AR and distance of the stimulation point from the adaptive point on the subject's emotional scale (for details, see the ref. 20).

The strength of empathetic stimulus depends on multiple factors. The strength will increase –

1. With more proximity to the victim.
2. If the victim is known or familiar to the subject.
3. If the subject is emotionally involved with the victim through other emotions – particularly 'love'.
4. By experiencing the sufferings of the victim through more sensory perceptions – auditory, visual, tactile, etc.
5. If the victim is close to the subject on the basis of one or more of the following grounds in descending order – of same family; of same group; of same culture, race, religion and society; of same region; of same nation; of same species.

[In this case, it should be mentioned that interpersonal relationship (that is emotional involvement through other emotions) is more important than being in the same society or same species. One should be more empathetic towards his pet family dog than some distant unrelated human].

Milgram showed that the percentage of participants obeying to the final step gradually declined depending on greater proximity of the victim and higher perception of victim's sufferings. In a series of experiments, Milgram checked out four experimental conditions to detect effects of the proximity and psychological intimacy of the subjects with the victim on experiment's outcome – (S_1) the subject and the victim were in different rooms separated by a wall, and subject could not hear from the victim; (S_2) the subject and the victim were in different rooms, but the subject could hear from the victim; (S_3) the subject and the victim were in the same room, with the victim placed one and half feet from the subject; (S_4) the subject and the victim were in the same room, and the subject had to place victim's hand (which was not fixed) forcefully on the electrical plate in defiant conditions [4, 5].

The results revealed (Figure 7) that full obedience to the final step shown by the participants were 65% in cond. (S_1), 62.5% in cond. (S_2), 40% in cond. (S_3), and 30% in cond. (S_4); level of significance: χ^2 (3, N = 160) = 14.077, p = 0.0028.

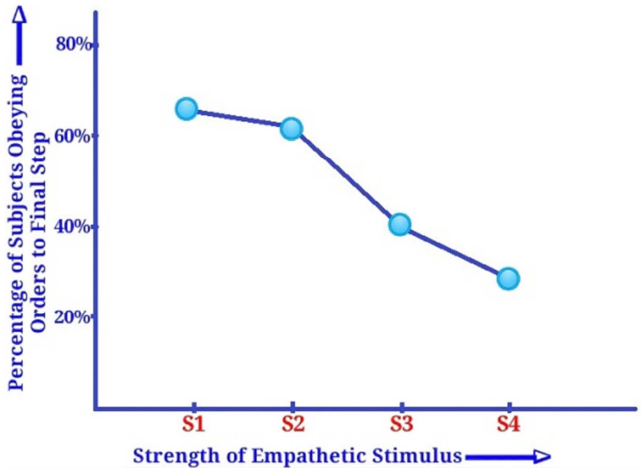

Figure 7. *Obedience influenced by the strength of the empathetic stimulus.* [χ^2 (3, N = 160) = 14.077, p = 0.0028].

Milgram, besides empathetic cues, also conjectured another reason for increasing disobedience with proximity. That is with proximity, the subject became aware of his actions being observed by the victim; and this by fomenting 'shame or embarrassment' within the subject, precipitated stress upon their minds. So here, another emotional arousal of 'shame or embarrassment', from doing something wrong to someone, was involved that also controlled the behaviours of the subjects.

In an unreported experiment (relationship condition) conducted at Bridgeport, the effect of familiarity on the strength of empathetic stimulus was illuminated. In this experiment, Milgram selected a pair of personally related subjects to play the roles of a teacher and a learner. In experiment when all left out of the learner's room, Milgram entered into the learner's room and explained the learner true objective of the experiment and instructed him to carry on usual experimental proceedings from the learner's side. The teacher and the learner were related in some way (friends, relatives, or neighbours). The result revealed that 85% of subjects (17 out of 20) showed disobedience [38, 39].

Besides emotion 'empathy', other emotions that were involved in the experiment and whose stimuli the subjects had to deal with similarly on the emotional scales, were 'fear' (as already discussed under 'obedience'), 'shame or embarrassment', and 'anger'.

For arousal of 'shame', besides the above-mentioned point of view, there was another prospect. The subject initially assigned a contract against money and pledged to help the experimenter in his study to reach a scientific goal. Breaking off that contract and receding from that allegiance also made the subjects face with the emotion 'shame or embarrassment'. When there are possibilities of two responses on the same emotional scale, if it is on negative side (as in this case), the person will try to avoid the one of greater intensity because it will bring more unpleasant sensation.

Now we will come to the emotion 'anger'. 'Aggression' is an expression that comes from the subjugated state on 'anger' emotional scale. Any normal person if not highly upjugated (as previously stated, we cannot exclude the central tendency in case of emotional adaptation), seeks for positive adaptation on any emotional scale. And in that case, the AR will show a tendency to move from negative to positive end on any emotional scale. This tendency is negatively related to (but not linearly related to) the position of AR on that emotional scale. In simple words, when AR would be on a more negativeward location, it would have a greater tendency to move positiveward; or a person who is more subjugated on an emotional scale, would crave more for positive adaptation on that emotional scale. A person more subjugated in 'anger' emotion, will tend to exhibit more aggressive activities to get upjugated. And this determines the index of a person's aggressive attitude (excluding the genetical factor determining the magnitude of that emotion). In Milgram's experiments, the subjects' aggressive indices have not been tested. But they had had definite effects on the experiments' outcomes. Haas reported how obedience could be related to hostility. In his study, 44 managers were ordered to evaluate their superiors, and recommend their inept superiors to be fired. Their degree of obedience was measured upon a six-graded scale starting from 'refusal to participate' to 'fully obey or recommend'. And each subject's individual hostility was determined by Siegel's Manifest Hostility Scale. It was revealed one-seventh of them fully obeyed that order, and there was a positive co-relation ($r = 0.52$, $p = 0.01$) between the degree of obedience and subject's hostility [40, 41].

So, besides empathy, there were also other emotional forces that were exerting their effects upon the final choice by the subjects on continuation or discontinuation of the experiment.

4.2. Previous Emotional Adaptational State

For any emotional adaptational process, it requires change of the mental state through either emotional expression in case of 'upjugation or positive adaptation', and emotional repression in case of 'subjugation or negative adaptation' (Here 'repression' and 'suppression' both words could be applicable; but I think 'repression' is a better choice as the person is not forcefully creating suppression on his emotion, but the emotional state of him is being automatically modified in adaptational process. However, Freud used these terms, albeit closer but with different meanings). In case of positive adaptation, the subjective feelings by the expressioner is pleasurable, and in case of negative adaptation, the emotional repression is unpleasurable and produces mental stress depending upon the extent of adaptation.

Coming to the experiment, during experiment, the participants were undergone 'subjugation or negative adaptation' on different emotional scales. The stress of negative adaptation manifested through varying features exhibited by the subjects during the experiment. Those were, as Milgram reported, sweating, trembling, stuttering, nervous laughter, and even in some subjects – uncontrollable seizures [4]. Needless to say, any emotional adaptation also involves autonomic nervous system featuring exhibitions of various autonomic manipulations; like, ↑ heart rate, ↑ skin

conductance and sweating from sympathetic overactivity and parasympathetic subdued activity; and ↓ heart rate, ↓ skin conductance and dryness from parasympathetic overactivity and sympathetic subdued activity.

Now, regarding adaptation on empathetic emotional scale, when adaptive range is settled on the positive side of the scale, the person will be more empathetic to stimuli as most of stimuli would elicit response on the negative side of it. The more would be the distances of the stimulating points from AP, the greater would be the sensations of empathy (intensity of an emotional perception depends on the distance of stimulating point of the stimulus from the AP); and the person will suffer from more mental distress to be adapted to the ultimate empathetic stimulus of the experiment as the adaptation process will have to go far to reach a certain desired level (Figure 8).

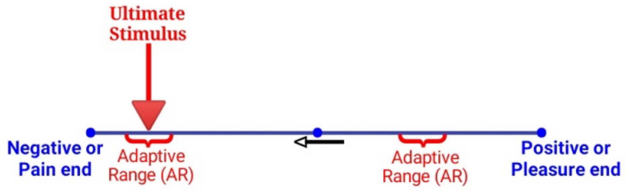

Figure 8. *In case of a more empathetic person, adaptation process will have to go far to reach a certain desired level.*

But in a case where AR is settled on the negative side of the emotional scale, the person will be less empathetic to stimuli and will suffer from less mental distress to be adapted to ultimate stimulus, as the adaptation process will have to proceed for a shorter course (Figure 9).

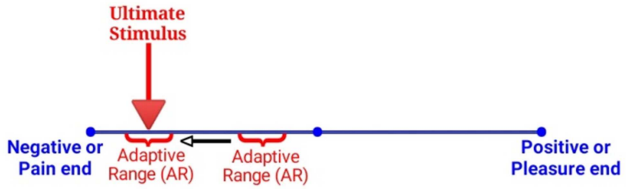

Figure 9. *In case of a less empathetic person, adaptation process will have to proceed for a shorter course.*

When more mental distress is rendered, the subject will breakdown at earlier point, and when less mental distress is rendered, the subject will proceed far on in the experiment.

Now, when AR is situating on a negativeward location, as in case of figure 9, the subject may feel sadistic pleasure at initial stimuli, as there is a greater chance of them to elicit response on positive side of AR, till the stimuli would cross over the AR. And in case of later severe stimuli, his AR will have to move less to be adapted (consider Figure 9). Hence that subject would go far on in the experiment in comparison to the subjects who, from the beginning, were either empathetic or neutral in feelings. In the latter case, same initial stimuli would educe response on 'negative side of the AR' or 'within the AR' respectively on the emotion scale (consider Figure 8).

This is evident in the film 'obedience', made by Milgram on his experiment. Here, I observed the subject Fred Prozi was getting amused or deriving pleasure at the initial levels of shock. Below, I am giving one of those stills for better understanding (Figure 10). Incidentally, that subject continued to go on to the final shock. One thing to be noted is that laughter does not always signify sadistic pleasure.

Figure 10. *Feeling of sadistic pleasure at initial shocks. (https://youtube.com/watch?v=rdrKCilEhC0).*

After the experiment when the subject would come back to his normal life situation and surroundings, the reverse adaptation would occur on emotional scale of the subject. But at the same time, the fact of giving mortal shock to an innocent would be stored as memory within his mind. In future, if he is not debriefed, he would suffer from concerns and severe empathy whenever he would think or recollect that memory. This is evident in the statements of experiences of non-debriefed subjects as documented by Gina Perry [42].

This previous adaptational state, or location of AR on emotional scale before the experiment, is similarly applicable to all other emotions involved in the experiment besides 'empathy'. Those were primarily 'fear', 'shame or embarrassment', and 'anger (its pre-adaptive state, as index of aggressive attitude, has already been described under previous subheading)'.

4.3. Genetic Variability

We do not possess all the emotions with same magnitudes. Different animals though share many of the common emotions like 'anger', 'fear', 'love', 'joy', and 'curiosity', they do not possess some emotions, the privilege of having which is only restricted to humans; for example, 'humour', 'shame or embarrassment', etc. The magnitudes of different emotions are designated by EQs. For example, the magnitude of empathetic emotional scale is designated as E_eQ (for 'love', E_lQ; for 'anger', E_aQ; etc.). Higher EQ will define greater magnitude or wider expanse of the emotional scale [9].

Here magnitudes of the emotions, designated by EQs, correspond to the length of the emotional scales. That means how long he can go, or how severe sensations he could feel at the extreme ends. This is true for both the positive and

negative ends. So, it is also predictable that a person who feels intense love, will also feel intense bereavement; a person who feels intense joy, can also feel intense sadness; a person who feels intense fear, can also feel intense courage; a person who feels intense empathy, can also feel intense sadistic pleasure. A person with lesser magnitude of an emotion, will feel both the ends of the scale with lesser sensations.

So, a person having higher magnitude of 'empathy' emotion, will be able to feel both intense sadistic enjoyment and profound empathetic concern depending upon the determinants of his AR on that emotional scale. A person with the lower magnitude of this emotion 'empathy', will be able to feel neither much sadistic sensation, nor much empathetic concern. A person who do not have this emotion at all or in whom this particular emotional center is absent in brain, will feel no sensation arising out of this emotion – neither empathetic nor sadistic.

And much of this Emotional Quotient (EQ), as is in the case of Intelligence Quotient (IQ), is depended on genetics. Possession of an emotion along with its specific magnitude or EQ is mostly hereditary. When judging an act of a person on the ground of empatheticism, this genetical variability should also be taken into consideration.

According to Sigmund Freud and ethologist Konrad Lorenz's instinctivistic theory, mass murder or large-scale destructiveness is related to great amount of confined aggressive instincts (Lorenz described it as a 'psycho-hydraulic model' of emotional or instinctive pressure) [43-45]. But in case of holocaust, most of the holocaust perpetrators have never been reported to be greatly holistic or to have high aggressive indices that can cause that kind of brutality or destructiveness.

Below are some evidences:

i. Amos Elon, in the introduction of Hana Arendt's book, wrote about Arendt's assessment of Eichmann's shallowness or inner void – "*He personified neither hatred or madness nor an insatiable thirst for blood, but something far worse, the faceless nature of Nazi evil itself*". In Arendt's own words – "*The trouble with Eichmann was precisely that so many were like him, and that the many were neither perverted nor sadistic, that they were, and still are, terribly and terrifyingly normal ... this normality was much more terrifying than all the atrocities put together*" [46].

ii. Before Nuremberg trial, psychiatrist Douglas Kelley and psychologist Gustave Gilbert conducted Rorschach's test on 16 Nazi defendants in the trial. Though there were some initial discrepancy in interpretation, years after the tests, yet today, psychologists and psychiatrists with advanced knowledge of analysis failed to differentiate any significant deviations in Nuremberg Rorschachs to indicate anything specific in psychological nature of the defendants that could be stamped as 'unusual' or 'pathologic'. Certainly, none was shown to be a hostile, impulse-driven sadist [22, 47, 48]. Barry Ritzler suggested this Rorschachs responses as "*inability to empathize with other human beings*" [49]. In later years, on the basis of his personal communication, Gilbert described this mentality as "*the unfeeling, mechanical executioner of orders for destruction no matter how horrible, who goes on and on with this ghastly work as though he were a mere machine made of electrical wiring and iron instead of a heart and a mind with no qualms of conscience or sympathy to restrain him*". According to the testimonies of the holocaust survivors, most of the holocaust perpetrators were identified neither as having a killer's personality, nor as being a sadist [22].

iii. Readers should consider the case of the subject Bruno Batta, welder, in experiment 4 (touch-proximity) as described by Milgram in his book [4] – "*Mr. Batta is a thirty-seven-year-old welder. He has a rough-hewn face... somewhat brutish.... But he relates to the experimenter with a submissive and deferential sweetness.... The learner, seated alongside him, begs him to stop, but with robotic impassivity, he continues the procedure. What is extraordinary is his apparent total indifference to the learner; he hardly takes cognizance of him as a human being.... He seems to derive no pleasure from the act itself.*" He went to the highest level of shocks and in post-experimental interrogations, he conveyed he didn't feel nervous at all, and he fully believed the learner was getting painful shocks.

However, it is a debate of decades about how much Germans were conditioned to the situations and how much it was their inner nature in the impassionate activities of them during holocaust.

So, apart from the factors of 'emotional induction' and 'previous emotional adaptational state', genetics of the subjects had a bearing on the results of Milgram's experiments.

There are a number of tests that can measure individual differences in empathetic concerns which can affect Milgram's-like experiments. The noted ones are Hogan's Empathy Scale (Hogan; 1969), Emotional Empathy Tendency Scale (Mehrabian and Epstein; 1972), Balanced Emotional Empathy Scale (Mehrabian; 1996), Multidimensional Interpersonal Reactivity Index (Davis; 1980, 1983), Empathy Construct Rating Scale (La Monica; 1981), Picture Viewing Paradigms (Westbury & Neumann; 2008), and others. Neuroscientific measures like, MRI, fMRI, facial Electromyography (EMG) have also been used to measure the extent of 'empathy' with high reliability [50]. But all these measures assess a person's empathy in a particular time, or a person's average empathetic attitude. They are not true indicator of the magnitude of a person's empathy emotional scale, as empathetic concerns of an individual are conditioned – that means it is dependent on the determinants of location of AR on that emotional scale.

One may wonder, having this emotion in considerable magnitude, why some people are very empathetic and some

people are opposite, though the emotional scale has both of its sides. The answer has already been described in second subheading under this heading – that is previous emotional adaptational state, or conditioning on memories and experiences that a person has accumulated or gone through since his birth. The emotional memories that we have built throughout our upbringing – all act conjointly in different strengths (depending upon the degree of neutralization of them), either consciously or subconsciously, as stimuli on our different emotional scales. Only resultant forces of them act on a particular position of an emotional scale that ultimately fixes the position of AR (for details, see ref. 9, 10, 20).

A man is hard to change, because we are – actually our memories (consciously or subconsciously). As we cannot change the memories of a person throughout his upbringing, and in most cases, cannot change his surroundings too, we also cannot change a man's self and reactions on different emotional scales, arising from past and present memories. Taking this perspective, aside some genetical difference, a terrorist is not much different from an empathetic man in other ways.

In Milgram's laboratory, in artificial condition, through situational forces, a person's AR on 'empathy' had been transpositioned through gradual adaptation. But it was transitory. Whenever, the person would come to his normal surroundings and his self, his AR would be repositioned. And if that readaptation was towards positive side, he would repent or suffer from his actions if he was not debriefed. And, even if he was debriefed, he would wonder how he could do this. This could also be evidenced in the statements of reflected feelings in Milgram's post-experimental interviews of the participants [4, 37]:

i. "*A person like me hurting you, my God. I didn't want to do it to you. Forgive me, please. I can't get over this.*" – Mrs. Rosenblum (Exp. 8).
ii. "*My reactions were awfully peculiar ... giggly. ... This isn't the way I usually am ... to the situation of having to hurt somebody; and being totally helpless and caught up in a set of circumstances where I just couldn't deviate and I couldn't try to help. This is what got me.*" – Mr. Morris Braverman (Exp. 2).
iii. "*I felt rather guilty, because I was still giving him the shocks.*" – Subject 0201.
iv. "*I really didn't – didn't want to continue.*" – Subject 0206.
v. "*When I was a subject in 1964, though I believed that I was hurting someone, I was totally unaware of why I was doing so.... I am fully prepared to go to jail if I am not granted Conscientious Objector status.*" (In a letter to Milgram, from an obedient subject of Princeton replication of the experiment).

Psychiatrist Paul Errera, on interviewing 40 subjects (already debriefed) after some 12 months of the experiment, reported – '*A few accepted responsibility for their actions and described their distress when faced with their willingness to inflict pain on another human being. They felt that as a result of the experiment they had learned something valuable about themselves*' [51].

But, if it were such that Milgram's laboratory a long-lasting social surroundings and the general norm of human civilization, the subjects would have been gradually adapted to those deeds and felt those their normal activities. It should be remembered 'holocaust' was not devoid of any philosophical propeller. Post-Darwinian philosophy at the close of the nineteenth century, particularly dominated by Fredrick Nietzsche, gave birth to 'Nazism' and 'Fascism' – the ultimate expression of which we experienced in 'holocaust'. So, there was no moral hindrance that could have made holocaust perpetrators abstain from their activities. But with that, 'group psychology' was also strongly involved in holocaust. (For how 'group psychology' is related to nature of emotions, see ref. 19).

Both of these above-mentioned discussions under this heading, one dependent on 'nature' and another on 'nurture', also provide explanation for the cross-cultural or cross-national variations in the results of the replicated Milgram's experiments in different countries. For details of the studies, see Blass, 2012 [2]. Interestingly, high degrees of obedience rate were found in replications of Milgram's standard experiment conducted in South Africa, Germany, and Austria (87.5%, 85%, and 80% respectively; mean US obedience rate was 60.94%, and mean non-US obedience rate was 65.94%). And though, according to Bond & Smith's meta-analysis [52], trends of conformity is higher in collectivistic society, in India, obedience rate was just 42.5%. But we must be careful about interpreting this comparison, because there were obviously experimental biases or variations in conducting experiments, experimenters' subjectivities and selecting subjects.

5. Discussion

This article has given an effort to provide a comprehensive explanation for the famous, yet discomforting psychological experiment of all time, that unveiled an ungracious facet of the human psyche. For decades after the experiment, psychologists and many others wondered and pondered on this shocking revelation of human nature persistently.

Multiple factors that could have affected the behaviours of the subjects in this experiment have been described in details in this article. Namely, they are: (1) the strength of empathetic stimulus to elicit response on 'empathy' emotional scale of the participants, (2) the power of the authority to effectuate stronger response on 'fear' emotional scale of the participants, i.e., the strength of 'fear' stimulation elicited by the authority to make the participants obey, (3) the gravity of the surroundings and environment to foster stronger response on 'fear' emotional scale of the participants, (4) a response on 'shame or embarrassment' emotional scale of the subjects, (5) previous adaptive states on 'empathy', 'fear', 'anger', and 'shame or embarrassment' emotional scales of the participants, (6) participants' social, cultural, and familial pre-existing beliefs and moral principles, (7) genetical make-up of individual persons that determined the magnitudes of

different emotions within them.

All these factors generated two counteracting forces within the subjects, one for continuing the experiment and another for discontinuing the experiment. These two forces ultimately balanced up on a certain point, before and beyond which one force prevailed over another force.

The conjectures that were made by Milgram to account for the results of his experiments are superficially appropriate reckoning the fact that he could not provide any basic psychological mechanism. So, his endeavour was, better to say, 'experimental and observational', rather than 'theoretical and analytical'. He uncovered the truth, and explained it as in its own dimensions - under the shade of 'obedience to authority'; and he did not delve into deeper than that. But he often left it for future theoreticians as he quoted in his book like, "*... any future theoretician will must take it into consideration.*" [4]. He excluded conformity as a possible explanation because mutually countervailing demands from learner and experimenter to conform in the experiment actually nullified most of its effects.

However, the effects of gradual emotional adaptational processes have not been considered by Milgram in his experiments. Its worth could have been fully realized if he had conducted the experiment with variations such as, 'the person is being instructed to reach rapidly to the final step (e.g., increase of voltage by 50 volts)' and 'the person is being instructed to reach slowly to the final step (e.g., increase of voltage by 15 volts)'.

As, this day we cannot reconduct Milgram's experiment because of ethical prohibition, we have to be satisfied on other modes, like questionnaires and assumptions. And this is obviously the reason why the previous predictive poll reported much lower mean maximum level of shock [4]. Because during polling, the candidates were thinking of the final level of shock, they were not considering or being exposed to gradual emotional adaptational processes.

Overall speaking, as this article suggests, both emotional adaptational processes (which have a greater influence) and individual trends of the subjects contributed by genetical built of persons as well as their corresponding social and cultural norms, beliefs, and principles are responsible for behaviours like what were shown by the participants in Milgram's experiments. We see, the first five factors cited above under this heading constitute emotional adaptations in situations and are guided by situational determinants, whereas the last two factors constitute the subject's personal trends. The importance or influence of the latter, however, cannot be neglected. Ross and Nisbett stated – predictability ceiling between measured individual differences on a given trait dimension and behaviour in a novel situation that tests that dimension is typically reflected in a maximum statistical correlation of 0.30. This magnitude of correlation though leaves a great bulk unaccounted for, yet it is quite important for consideration of a subject's personality trend in a given context [53]. And all these factors ultimately define our stands to act in explicit ways in different situations with different times.

6. Conclusion

Milgram's experiments & similar others advocate the fact that most of the crimes are executed in situational conditions. Various emotional adaptations and adjustment against situational demands lead to outlet of particular behaviours that may culminate into destructive processes. We cannot assume all the criminals are suffering from psychopathological disorders. That would be a fundamental attribution error. However, though Milgram's experiment speaks for extenuation of crime particularly that was perpetrated by the war criminals engaged in the gruesome acts of genocide, but for that the gravity of the punishment cannot be diluted. Because the purpose of the punishment is to produce and establish 'fear-stimulating' instances that would prevent people to act in the similar way in similar future situations. And as explained all throughout this article, this exemplar would act also as a stimulus of inhibition among other situational constituents when people in future will face conditions that will provoke them to perpetrate similar acts.

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