ATTITUDES ABOUT SOME CONCEPTS REGARDING SOCIAL IMPLICATIONS AT ENGINEERING STUDENTS
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Abstract: Attitudes towards certain social categories influence the behavior of people to accept or reject these categories. Measurement of attitudes aims at detecting the wrong attitudes and trying to correct them through providing additional information. The attitudes of a group of 100 engineering students were evaluated against four social categories: the elderly, the beggars, the disabled and the divorced people. A Likert scale of 1 to 5 was used with the following elements: 1 - unacceptable and 5 - very acceptable. The obtained results reflect the attitude of engineering students towards these
categories: strong rejection towards the beggar category, moderate rejection to the category of disabled people, attitude of ambivalence towards the elderly and acceptance and tolerance towards divorced people.

**Keywords:** attitude, social categories, acceptance, tolerance

**Introduction**

The concept of attitude occupies an important place in social psychology. A first definition of the concept of attitude was proposed by G. W. Allport in 1935. In his opinion attitudes represent "the predispositions learned to react with consistency to an object or a class of objects in a favorable or unfavorable manner." From this unanimously accepted definition we remember that attitudes are learned, not instinctive, that attitude is a predisposition for manifestation of a certain behavior, that the answers are oriented positively or negatively and last but not least that the attitudes are lasting (Allport, 1981).

Among the scientists who have tried to define over time the attitudes include George Katona and Guy Serraf.

Katona's merit is that it showed that attitudinal data influences buying behavior. Based on the survey data, he came to the conclusion that a series of individual attitudes and also an index of attitudinal variables influence buying long-term goods (apud Popoviciu, 2013). For Guy Serraf, attitude is a regulatory system between the energy reserve of motivations and the demands of the outside world. Attitude functions as a syncretism of intellectual, symbolic and motric images. Attitude is not innate, it is acquired through the long process of learning and experience, and remains open to external influences (apud Dragan, Demetrescu, 1996, p. 86).

Analyzing the concept of attitude, Jean Stoetzel shows that in social psychology there are four well-defined meanings for this notion: 1) attitude is an inferior variable that is not directly observable or observable; 2) attitude is a state of specific training for action and involves a relationship between a person and an object or situation, distinguishing the character traits (of an individual subject) that does not involve any specification of the situations; 3) attitudes have a polar character, they are always for something or counter and are subjectively correlated with the values; 4) attitudes are formed by experience and are likely to be influenced by external factors, for example, social compliance is attitudes tailored to values and types of social norms (apud Craciun, 2005, p.162)

*Attitudes dimensions*

After most authors an attitude has three dimensions:
- The affective dimension that corresponds to the affective component, ie the favorable or unfavorable mode in which a consumer reacts to a particular object is the most important aspect of the attitude. Affective behavior is most often influenced by the association of the attitude object (a thing, a situation, an idea or a person) with previous experiences that may be pleasant or unpleasant. The affective component gives the attitude its meaning and direction (Rosca, 1976).

- The cognitive dimension of the cognitive component is the conscious side of attitude. It is the way of informing a person about the object of attitude, consisting of the knowledge, information, beliefs and images that the person holds about the subject (Boncu, 2002).

- The intentional dimension to which the intentional or selective component corresponds refers to the tendency to act in relation to a particular object. However, intentional behavior must not be confused with the behavior itself, although there is a link between attitude and behavior (Chelcea, 2006).

As Tridiatis looks attitudes, it refers to what people know and think about the object of attitude, what they feel, and how they want to behave towards the object. Behavior is not only determined by what people would like to do, but also what they think they should do, that is, social norms, of what they have done in the past, that is, of what they are accustomed to also make the anticipated consequences of their conduct (Keller 2012).

Besides these models proposed by psychologists, there are others proposed by marketers.

Of these, the most important are: the Rosemborg model and the Fishbein model. The Rosemborg model indicates that the intensity and direction of the attitude effect induced by the object under consideration represents the attitude of the subject relative to the object. In simple terms, attitude behaves a sense of feeling and a direction of it, with two main components:

The perceived utility. This is the objective ability of the object to acquire a certain value; in other words the utility of the object.

Importance of value. This is the satisfaction felt by the subject, induced by the acquisition of value by the subject. Or, more simply, it is important to achieve the goal pursued by the consumer (subject) by buying and using the product (the attitude object) (Blythe, 1999).

The relationship between attitudes and behavior

Even though attitudes are determined by factors that are persistent and sustainable, they are subject to change.

According to Zaltman and Burger, it appears that the state of the attitude system is determined by five factors: 1) information and emotional states resulting from recent experiences of meeting needs; 2) information gathered in the past that is not directly related to efforts to meet needs; 3) belonging to a
social group and the links with its members (especially the adoption by the person concerned of the beliefs, norms and values of the "significant" members of the group); 4) attitudes towards associated objects, in some form, with the object of the analyzed attitude and 5) the personality and individuality of the person concerned (Ilut, 2004).

Generally, attitudes are hard to change. However, attitudes can change. The most important causes of change in attitude are the negative changes in the five factors listed above. Also, the social and cultural life of the group, the economic, social, political, religious, artistic, etc., of the members who compose it, do not receive a sufficient explanation, if we abstain from the phenomenon of social attitudes. For, as Thomas notes, attitudes are more or less general in all the members of the social group. They have a particular importance in organizing the lives of individuals and manifest themselves in almost all the social and cultural activities of these individuals.

Definitions of attitudes

Paul Popescu-Neveanu: attitude is "a relatively constant way of reporting the individual or the group to certain aspects of social life and to one's own person" (Popescu-Neveanu, 2013).

Baron and Byrne (2004): attitude refers to "Our assessments of any aspect of the world social, the extent to which we have favorable or unfavorable reactions to problems, ideas, people, social groups or other elements of social life".

S. Chelcea: the attitude is "the position of a person or groups of acceptance, or despair, of a greater or lesser intensity, of objects, phenomena, persons, groups or institutions" (Chelcea, 2008).

S. Asch: "Attitudes are long-lasting tendencies, determined and shaped by past experience" (apud Pratkanis, 2007).

Katz and McDonald: Attitude is a predisposition to act positively or negatively towards people, objects and events. Many definitions of attitude highlight its bipolarity, which implies that the attitude is on a continuum from favorable, positive, to unfavorable, negative, passing through zone 0, neutral. Most attitudes are unipolar at the individual level (the position of the person is either accepting or rejecting an object of attitude), but there are situations where people appreciate an object under different aspects and depreciate it under others, a state called ambivalence. Scott defines the equivalence as the coexistence of positive and negative evaluations towards an object of attitude (i.e., a person with a positive attitude towards animal protection agrees with the euthanasia of stray dogs - negative attitude (apud Weiner, Tennen, Suls, 2013).

Structure and formation of attitudes

In terms of defining the attitude concept, two schools of thought were set up.
A) *The Trifactorial Approach* (Rosenberg and Hovland, 1960) argues that an attitude includes: 1. a cognitive component, insofar as the evaluation of the object is based on certain knowledge, perceptions, beliefs, opinions, representations and memories. An affective, negative or mixed affective component, in which our emotions, our feelings and our states of mind lie in relation to a certain object. 3. a behavioral intention / disposition, or, in other words, the tendency to act in a particular way towards the object (verbally expressed as intention or directly observed) (apud Neculau 2004).

B) *The unifactorial approach* (Olson and Zanna, 1993) understands by attitude one emotional component. I like, dislike, love, hate, admire, detest the words that people describe their attitudes. Attitude is a global assessment of the subject on a "favorable / unfavorable" continuous dimension. Attitudes are mostly socially learned but also have a genetic foundation. There are three sources of attitudes: social learning; social comparison; genetic factors (Neculau, 1996).

*Change of attitudes*

Man is subjected, throughout his life, to an informational bombardment to change his attitudes. Messages sent by the media, by individuals or groups, have uncharacteristic persuasiveness, striving to change our attitudes. These psychological and educational assistance offer rectifies initial training deficiencies, offer intellectual, moral, emotional "weapons" to the individual to the new demands (Munteanu, 2009).

Change is a consequence of receiving information, accepting and processing messages. It therefore matters who communicates, what message conveys, how it sets, the goals pursued, the psychosocial context in which the receptors are trained (their level of intrusion, the intensity of expectations expressed by them, their system of interpersonal relationships.).

The source (person, institution, grouping) is the most important link that can affect the modulin that communication is received. People are willing to change their attitudes only by touching the communicant's arguments are guarantees of a "benefit", of an acquisition (in a planetary, behavioral) that will lead to "advantages" (= increase of personal value, a higher social status, professional satisfaction, higher mental comfort). If a person does not give credit to the source of information, he organizes a strategy of "resistance" (Bonchis et al., 2009).

The source may also be the group (of "belonging" or "reference") that exerts "pressure" on the individual to change it. We often have a tendency to "go with the others", to aim for the opinions of those we admire or from which we are part. If the group moves the message of an individual, then it makes it more "convincing" for each individual, gives it "weight" (Golu, 2005).
The possibility of getting the change also depends on the receiver's preferences. His degree of deinstitution, his training environment, his cultural capital, the attitudes and mentalities of his social background. We usually accept an idea, an attitude if it is close to what we believe or inspires sympathy, confidence, and the one that tries to convince us. The similarity is one of the most important bases of sympathy and it has been - people are willing to they are influenced rather by those who like them than by the very special ones. It is also important the physical aspect of the communicator: those who are agreeable are followed rather than any unattractive appearance; those who speak quickly are more convincing than those who speak rarely, taraganated; publicly recognized competence, aura, status of expert impresses. We are often willing to identify with some people who attract, persuade, disturb, excite. And any antipathy towards the communicator or disbelief in his competence leads to rejection of the message. Equally important is the attitude of the one who communicates: the more intent to change the other (the others) is more visible, easier to decipher, the better the chances of achieving the desired result are small. His comment, therefore, must be "uninterested", impartially, to denote integrity and honesty (Zlate, 2006).

The concrete situation in which the "attack" to change attitudes can play an important role in achieving success. Here, the media, the political commentators do not tell us that the change of our economy is a difficult, painful problem that can cause undesirable side effects. Preventing, "alert", "preparing" the public for a difficult situation makes it easier to bear, losing its "shock" effect. We know that East European countries are confronted with unemployment, the phenomenon is present in us, it seems "natural" to focus in the years to come. A "favorable" atmosphere can affect the potential receptors, "psychosocial contact" can alter the effects of the message. The receptor's specificity can determine (re) organize its defensive tactics (Wosińska, 2005)

The specific characteristics of the character derives from the interaction between attitudes or the interaction of segments within the same attitude.

The interface between the internal structure, profound character and the manifested conduct is the attitude subsystem. Attitude is the fundamental component of character. It is a mental, synthetic construction that brings together intellectual, affective, and volitional elements. Attitude is the internal position taken by a person to the social situation in which he is put. It is constituted by the selective, relatively durable organization of different cognitive, motivational-emotional psychic components and determines how a person will respond and act in one situation or another (Boza, 2012).

The most common interactions between attitudes are:
- coordination, cooperation or contradictions
- incompatibility, even mutual exclusion
- compensatory relationships, the deficient attitudes being ameliorated (compensated) by the most prominent ones.

The uneven development of the two segments of one and the same attitude gives a specific physiognomy to a person's characteristic profile. Their attitudes and segments must not be interpreted in themselves, but according to their moral value. When attitudes are in accordance with the laws of progress, with social norms, they become values. It develops what Linton called the attitudes-value-specific attitudes system, which once fixed acts almost automatically, even at the subconscious level (Malim, 2003).

Characterial attitudes, without being confused with values, have value content and an evaluation function, and by this it regulates the individual behaviors of each individual. The external expression of attitude is the opinion and the action.

Opinion is the verbal-propositional form of externalization of attitude, consisting of value judgments and acceptance (agreement) or rejection (disagreement) about the various situations, events and value systems. Opinion is an observational way - passive reporting to the world that does not introduce any change in the situation (Zisulescu, 1978).

The degree of psychological engagement in the action is much higher than in the opinion, and as such, action becomes more relevant to revealing the essence of a person's character than the opinion.

There is no perfect and unconditional concordance between its attitude and its external manifestation, in the form of opinion or action. Due to the regulatory function of consciousness, a special switching mechanism is being developed in the characterizing structure, which makes it possible to temporarily and periodically dissociate between the internal plan of beliefs and attitudes in the external plan of opinions and actions. This occurs in the deduction, subsumed either by conformism or by negativism (Radu et al., 1999).

Within reasonable limits, deduction has an adaptive value, making it a convenient compromise between the individual and society. When the dominant feature is required, it turns into a brake in the way of an optimal interaction between the individual and the others. When individual attitudes converge to a significant extent, we will have external public opinion, which can be interpreted as the dimension of the social character that E. Fromm spoke (Cemat, 2005).

The action represents the entry sb. in a direct relation (sensory and motoric) with the situation and performing some (integration) transformation steps in the situation, modifying it or removing it. When it is subordinated to conformism, it can be socially beneficial but unfavorable to the individual, and
when subordinated to negativity, it may be beneficial to the individual, but socially repudiated.

**Hypothesis and lots studied**

Measuring attitudes is necessary in order to be able to compare the direction and intensity of attitude towards the same aspect of more people. It is usually done through opinion polls, usually formulated as questionnaires, generally based on a scale of attitudes; the scale requires the person to state the degree to which he or she disagrees with a particular statement, placing himself in the position that he/she considers to be the best fit. [18] For example, a 5-Step Attitude Scale may have the following positions on which the subject may place himself: strong disagreement, moderate disagreement, ambivalence, moderate agreement, and strong agreement.

The research has a positive character and started from the following hypothesis:

**The hypothesis:** engineering students’ attitudes towards certain concepts with social implications reflect their degree of tolerance towards certain social categories of the population.

**Lot studied:** a number of 100 students from Aurel Vlaicu University of Arad were surveyed.

**Methods used**

A 5-step Likert scale was built to evaluate four concepts describing population categories that are impacting everyday social life. The 5 steps have the following meaning:

- 1 - unacceptable,
- 2 - slightly accepted,
- 3 - indifferent,
- 4 - moderate acceptance,
- 5 - very accepted.

In the same context, it was considered that Likert scales also reflected the degree of tolerance towards the target population categories namely: 1 - intolerance up to 5 - increased tolerance.

The scale was used for the following four concepts: old people, beggars, disabled people and divorced people.

**Results and discussions**

After collecting data from the engineering students group, the average for each of the four categories of concepts was calculated. The results obtained are presented in Table 1.

<table>
<thead>
<tr>
<th>The average of the evaluations of the four concepts</th>
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<tbody>
<tr>
<td>concepts</td>
</tr>
</tbody>
</table>

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It can be seen from the table and the figure that the most accepted category, against which there is high tolerance, is that of divorced people. It is the category of elders for whom acceptance and tolerance are medium and the other two categories, the one of people with disabilities and the beggars, are in the low tolerance area.

The most rejected category and to which there is no tolerance is the category of beggars. For students who have a sustained learning activity, and many of them also have a job to be able to support themselves, the fact that these people do not work and demand the pardon of the passers-by is inadmissible. This attitude is supported by the explanations given by most of the students. They come to blame the passers-by, claiming that if no one would give them alms, they would be forced to work. This is all the more so since many of those who are begging are in full force and can work smoothly in various jobs to maintain the city. Another argument of the students is that the city looks bad with so many beggars present in all public places: on the streets, trams, restaurants or terraces, so that people cannot stand still anywhere without being approached by even one of them.

Students have other values: for them work is at the forefront, whether it's about learning or an actual job. Even more, for engineering students, work is equal to performance and productive output, or they can only be achieved if an individual has a well-organized and well-settled work. The fact that most of the beggars do not want to work cannot be accepted by the students. It is hard to understand for them that the beggars prefer to sit at the corner of the street to ask for charity, rather than work to have money from which they live. In addition, many beggars do not want to work because earnings by begging can be much higher than the salary they would get in an enterprise.

In order to better illustrate the attitude of engineering students against beggars, we are presenting their assessments in Table 2 and Figure 2.

<table>
<thead>
<tr>
<th>Category</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>elderly</td>
<td>3.24</td>
</tr>
<tr>
<td>beggars</td>
<td>1.07</td>
</tr>
<tr>
<td>people with disabilities</td>
<td>2.39</td>
</tr>
<tr>
<td>divorced people</td>
<td>4.63</td>
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</tbody>
</table>

Table 2.

Students' ratings for begging categories

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>

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Almost half of the students (41) give the rating unacceptable and implicitly show zero tolerance to this category of the population. If we take both values below the average we have three quarters of the students (73) who have this attitude towards the beggars. Only a quarter of students (26) have an ambivalent attitude towards these people and therefore this phenomenon. They keep on their principles of sustained work, but at the same time they are merciful to those who stay in the cold weather and beg. We have a single student who has a moderate accepting attitude towards beggars and no student in the high acceptance category. The one who has a moderate acceptance has been raised in an environment with strong religious principles (his father is a priest) and in which the precept of "helping the neighbor" has been inoculated to young children. This education has made him more empathetic towards socially disadvantaged people such as beggars and street people.

| Number of students | 42 | 31 | 26 | 1 | 0 |

![Figure 2. Student appraisals for the beggar category](image)

The following category as a negative assessment is that of people with disabilities, for whom an average of 2.39 ratings is obtained. Although we have entered the European Union for more than 10 years and should be rallied at European attitudes towards people with disabilities, some prejudices still exist and the old mentality, which leads to a rejection attitude towards those who have any form of disability. The European directives provide for the treatment of people with disabilities on an equal footing with any normal person and their inclusion in society as active participants (as far as possible) to all social activities carried out.

However, in our country, many people still have their strong retentions about the disabled people, whom they consider to be somewhere on the edge of the society and prefer not to have them in their entourage. Individual student ratings for this category can be seen in Table 3 and Figure 3.
The distribution of responses is more differentiated, illustrating at times contradictory attitudes among the students of the studied group. Half of the students rank their assessment and hence the degree of tolerance in the negative gradient: 23 students find it very unacceptable and 27 students unacceptable. In addition to the discussions with the students about the completion of the scale, it has been revealed that they do not want to team up with people with disabilities that could slow the pace of the team or even cause the failure of joint actions. We meet with the same attitude towards work, so pronounced at engineering students, and for which any factor that can negatively influence the return on labor must be rejected or eliminated.

![Bar chart](image)

**Table 3. Students assessments for the disabled category**

<table>
<thead>
<tr>
<th>Number of students</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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</table>

Twenty (20) students have an ambivalent attitude. They would agree to team up with people with disabilities, but at the same time they would not want to have a failure in what they do. We think they have partly understood that including people with disabilities in the work team, means giving them tasks that they can solve without being hindered by their disability. This understanding of the situation is very important for their future profession: they can, as engineers, hire people with disabilities, but in positions where they can cope without being hindered by the disability they have. It seems that the rallying of European principles is still ongoing and will still require another generation or two students to reach the full acceptance of people with disabilities with equal rights as any other person.

Thirty students (30) place their answers on the positive side of the scale, 18 students with moderate acceptance and 12 students with full acceptance. These attitudes of the students show that a large number of them already accept people with disabilities like fully righted people, accept them as teammates,
accept them as people who can make their contribution to the development of society, as far as they can. They understood that as they now accept as colleagues, they must also accept them as work colleagues in the future, without discriminating them because of their disability. Many people with disabilities actually want to work and participate in social life. They make considerable efforts to align themselves with the performances of others and these efforts must be appreciated by an unconditional acceptance of their attitude.

Of course, there are different forms of disability (physical and mental), but each of these people can carry out a certain type of work in which their disability does not affect the performance of the benefit. Their importance is their desire to work and to contribute, as far as possible, to the good progress of society. The attitude of students who accept disabled people and do not discriminate based on misconceptions and mentality is appreciated.

The category of elderly people is at the next level of the rating scale, at a level of ambivalence with an average of 3.24. The vast majority of students have positive attitudes toward elderly people, especially as each of them still has grandparents at home, who they are still connected affectively. However, they cannot fail to notice that sometimes the elderly are difficult and can prevent them from doing their normal work.

From discussions with students, we have found out that they are upset because when they have to come to classes and they are in a hurry, all trams are crowded by elderly people who go to the market, moving slowly, tangling them in their hurry to get to the faculty. They think that the elders have enough time and they can go to the market in other hours of the day not necessarily in the morning when it is a very busy time.

In addition, the elderly feel damaged if they are told something or if their attention is drawn and become very irritable, considering this as a lack of respect towards them from the younger generation. Endless contradictory discussions are often the background sound of a morning tram trip.

The elders can be highly accepted people because they represent their grandparents who feel strongly attached, but on the other hand they can be given a rejection attitude when their way to the market intersects with college students' path. Hence the ambivalence of students towards the elderly.

Discussions with students following the completion of the Likert Scale have revealed other reasons for student dissatisfaction: the elders are linked to conduct rules that young people consider to be outdated and expired. Elderly people often make critical remarks about the behavior of young people who follow modern rules that allow people to kiss publicly, women smoking on the street, etc. These observations are not well received by students who feel attained in their freedom of action and their independence. From here, the reactions can be different and the rejection attitude reaches new dimensions.
But overall, students' attitudes towards the elderly tend to be more moderate, so implicitly, moderate tolerance.

The most accepted social category, which has met few rejections, is the category of divorced people. If, 50 years ago, divorce meant almost a blame for society, divorces have become a phenomenon of the day, which is almost the same as that of marriages. Approving the law by which divorce can be done through good understanding, at a notary office, without requiring a lawsuit, has caused an alarming increase in divorce. A great influence in accepting this category is also the media that constantly mediates the numerous divorces of the stars. These aspects, as well as changing attitudes towards the family concept, have led to increased tolerance to divorced people.

Divorce is no longer considered a catastrophe and a social misstep, but it is often seen as a new beginning and an increased possibility of affirmation in society. National statistics in the recent years have seen steady increases in the divorce rate in the current society. This trend is on the general line of all countries reporting a decrease in the number of marriages, the founding of a family at older ages (after the age of 30), the decrease in the number of children.

Students appreciate that each of them must ensure professional success before setting up a family. They consider that marriages at younger age and before getting professional success are doomed to failure from the beginning. Extending the duration of studies, because each one wants to specialize through a master’s degree to have a better job, settles the age at which marriages fail. For the students of our lot, professional success is an essential condition of a stable marriage and the avoidance of divorce. It is believed that divorce is more tolerated precisely because it has become a common phenomenon present in everyday life: everyone has at least one friend or relative who is divorced, and that does not mean that the person has to be blamed or excluded from the entourage or from society.

Conclusions

The research had a staggering character and consisted of measuring attitudes and tolerance of engineering students towards certain social categories, such as beggars, elderly people, disabled people, divorced people.

The results obtained after completing the Likert scale by the students reveal an attitude of unacceptability and the very low tolerance to the beggar category, low acceptance attitude and low tolerance towards the disabled, attitude of ambivalence towards the elderly and attitude of acceptance and tolerance towards divorced people.

Discussions with students have also outlined the rationale for accepting or not accepting these categories. Main categories are rejected
because they may prevent them from performing their professional activities or those that interfere with them. In some situations, prejudices and misconceptions persist. They are more tolerated and therefore accepted by groups whose position is a common daily fact (divorced people).

Of course, the research should be deepened on different types of disability, or on other categories of people, and possibly compared with the attitudes of students from human specialty faculties.

**Acknowledgment:** we hereby state that the subjects involved in our research have been informed of the voluntary nature of the participation in this research, the understanding of information and the fact that withdrawal from research is possible at any time without negative consequences on the participant. The research complies with all ethical research standards, the research participants / participants' guardians give their consent to participate in the research.

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