

# Psychopathy Prediction and Factorial Classification on Twitter Profiles

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**Abstract**— There are different people with different personalities who interact on social media, there can be people with personality disorder and psychopaths. Human Language which created throughout communication may be representative of personality characteristic, further as emotional conditions, distinguishing features, and psychological feature vogue and words are the traces which we leave ourselves behind [1]. Language becomes a key factor in identifying personal personalities. Many researchers analyzed the link between psychopathic personality and language, also psychopathic tendencies are being derived by the communication patterns [2]. Psychopathy is also a subpart of the “Dark Triad” [3], a set of traits with a negative personality.

**Keywords**—Twitter, Psychopathy, Dark Triad, Social Network, Natural Language Processing, Machine Learning, Data Mining.

## I. INTRODUCTION

Social media is an internet-based form of communication. The past decades this internet-based social network has become a major role in society. User interactions like conversations, share information and create web content able to perfume with social media platforms. Social media become an essential part of life in the current world. Twitter, The tool that allows to micro-blogging and tools of social networking became a great way to show the success. Twitter had 326 million global monthly active users [4]. Twitter allows you to build open and serendipitous relationships with new people. These statistics of social networking area make it very interesting to study and follow. Huge Information’s about different individual’s interest and behaviors are provided by these services. Users propensity to believe that by only upload information they’re comfortable and secure with everyone reading, they won’t reveal any personal information. However, there is still the danger of posts leaking additional data than users notice. Important information and excellent amount of data about them, audience they deal with and situations that that faced themselves are exposed by their use of words. Statics like age, motives, social state, sex, are also exposed by the word selection of them. More than that emotionally combined facts like is an author, a speaker emotional connection whether

close or distant, neurotic of person, thoughtful or shallow and open to new experiences make sense by the words.

“**Psychopathy** is described as an antisocial and mental disorder in which an person shows lack of moral sense and antisocial behavior, lacks the capability to love or establish meaningful personal relationships, reveals extreme egocentricity and indicates an inability to learn from experience and other conditions- related behaviors” [5]. The psychopathy concept was officially introduced to the word in 1941 by Hervey Cleckley who is a psychiatry and forensic psychology in North American. From then there were many attempts to assess psychopathy with different approaches. Minnesota Multiphasic Personality Inventory [6], Psychopathy Checklist; PCL [7] and Psychopathy Checklist-Revised PCL-R [8].“gold standard” of psychopathy measures (e.g., [9], [10]). This rapid growth has produce decades worth of data to observe psychopathy and clarifying nature.

## II. FACTOR ANALYSIS

Previous studies with Psychopathy Checklist-Revised (PCL-R) on factor analyses able to provide an implied structure with two-factor including “8 units indicating (Factor One) Interpersonal-Affective features and 9 units indicating (Factor Two) social deviance features”. Afterward, [10] presented that a structure of three-factor could be redeemed from a part of thirteen Psychopathy Checklist-Revised (PCL-R) units. It includes three associate factors involving “ (Factor One) Arrogant and Deceitful Interpersonal Style; (Factor Two) Deficient Affective Experience, and (Factor Three) Impulsive and Irresponsible Behavioral Style”. After that, several researchers ([8], [11]) current structure introduced which validating factor analysis (CFA) of Psychopathy Checklist-Revised and including that eighteen of the units were justified by factors of four: (Factor One) Interpersonal, (Factor Two) Affective, (Factor Three) Lifestyle, and (Factor Four) Antisocial. Modern studies claim that psychopathy checklist screening version able to reproduce the four-factor model with less mechanism with low need of information. This method also able to use with not forensic works. Please refer below chart (figure 1).