

**THE EFFECT CREATIVE LEADERSHIP IN THE INNOVATIVE CLIMATE:
LEADER DIALECTICAL THINKING AS A MODERATING VARIABLE**

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Abstract

The climate that encourages innovation represents an important strategic dimension for which active organizations seek as it is the optimal mechanism for their development. To achieve this purpose, organizations need creative leadership that allows them to enjoy high professionalism to carry out their basic duties and tasks. To try to identify the modified role of the dialectic leader's thinking. The study included a sample of 354 employees in the South Refineries Company who were chosen randomly. The researchers used the questionnaire in order to reach the objectives of this study by formulating hypotheses that test that relationship, and we reached a set of results that indicate the existence of a positive role for creative leadership in the innovative climate. Also, this effect will be greater when the leader's dialectical thinking is at a high level. These results were discussed in order to identify one of the important mechanisms for managing human capital in industrial organizations in the oil sector.

Keywords: Creative leadership; Innovative climate; leader dialectical thinking; Employees.

INTRODUCTION

In the era of technological progress, creating an environment that encourages innovation and solving problems in creative ways has become an urgent necessity (Litvinenko, 2020). In this context, leaders play an important role in changing the work environment and making it a welcoming environment for new ideas that help organizations develop and succeed (Sani, Ekowati, V. Wekke, & Idris, 2018; Abdullah, Thajil, Alnoor, Al-Abrow, Khaw, Chew & Sadaa, 2022). This depends on the nature of the interaction between leaders and subordinates. Leaders who are effective in their relations with subordinates are able to collect, sort and analyze ideas and suggestions produced by workers (Hoang, Wilson-Evered, & Lockstone-Binney, 2020). Leaders who are open to new ideas, even if they are unclear and vague, may be more likely to create a creative work environment (Naqshbandi, Tabche, & Choudhary, 2018). The current

study attempts to explore the relationship between creative leadership along with dialectical thinking on the innovative climate of organizations (Khan, Ismail, Hussain, & Alghazali, 2020; Thajil & AL-Abrow, 2023).

Creative leadership is a creative and thoughtful response to challenging opportunities and issues that gives learning at all levels and is about seeing, thinking and doing things differently. Creative leaders provide the conditions, environment, and opportunities for others to be creative, not only about problem-solving but about (“seeing situations, finding better solutions to problems... looking for solutions that are not narrow-minded”) and also involving “problem discovery” (Louis & Miles, 1990). In the same context, leaders' dialectical thinking encourages a collaborative approach rather than a competitive approach to team conflict and is more likely to have mixed emotions and tend to deal better with stressful and changing situations. Team ingenuity requires both exploratory and exploitative learning activities in the team (Jansen et al., 2016; Kostopoulos & Bozionelos, 2011; Thajil, AL-Abrow & Abdullah, 2022).

Previous studies discussed the relationship between creative leadership and the innovative climate in different models and contexts, but they neglected variables that represent leaders' thinking towards the concepts of contradictions and change. As creative leadership does not necessarily accept contradictions, it accepts clear and convincing ideas. On this basis, the current study attempts to combine the concept of creative leadership with a dialectical thinking style that accepts ideas that are not clear (and perhaps not convincing at times) but are interesting and stimulating for discussion. In addition, the current study applies the study model in an important sector represented by the oil sector, specifically the southern refinery sector, which crystallizes its operations on products that can be developed or improved if new and creative ideas are extracted, accepted and discussed. For this matter, the current study model was designed to investigate the relationships of creative leadership variables in the innovative climate, and then to identify the interactive role of the dialectical thinking of the leader. To achieve this purpose, the previous literature and hypothesis construction will be discussed in the next sections, and then we will address the study methodology and data analysis results. In the end, the results reached will be discussed and theoretical and practical implications will be proposed, in addition to proposals related to the future directions of researchers in the future.

Literature

Innovative leadership concept

Creativity is the ability to generate new ideas and bring them to life, as well as the ability to bring people together as a team and accomplish new things. Innovation thus leadership is the process of setting the direction, alignment, and commitment necessary to build and accomplish something new and of value (Hughes et al., 2018). The term “innovative leadership” has gained significant traction over the past decade and is often associated with a leadership style that encourages creativity in devising new business strategies and models, in organizational development and in managing change in building environments and teams that use creative processes to innovate products and services (Stoll & Temperley, 2009; Hawash et al., 2022). Adjei (2013) described creative leadership as a synthesis of several leadership styles within the company in order to motivate people to generate new ideas, products, services, and solutions.

Thus, creative leadership is the process of building an environment conducive to innovation; it entails the development and implementation of roles, decision-making processes, and physical space. , collaboration, networks, and equipment needed to foster new thinking and testing Because innovation leadership is a complex subject, (Cushenberg & Hunter, 2010) assert that there is no single interpretation or formula that a leader follows in order to foster creativity According to innovation leadership, leaders tolerate a variety of One of the responsibilities when it comes to promoting innovation in companies, especially those that influence creativity and innovation Creative leadership is characterized by a focus on developing human and social capital as well as the ability to create a supportive environment within the organization (Randel & Jaussi, 2019). Creative leaders foster a sense of participation And motivation, growth and learning among employees, as they are essential elements for prosperity at work that make thriving employees show high levels of emotional, social and psychological well-being (Wissing & Temane, 2013).

Leader dialectical thinking

Based on functional assumptions, leaders who display a dialectical mindset represent a relevant situational cue for activating creative self-efficacy in employees (Miron et al., 2004). In this context, employees may hesitate to propose or implement creative ideas because they fear frustration, worry about risks, or fear failure (Millike et al., 2004). However, leaders who operate with a dialectical mindset may be more willing to welcome different ideas and be open to less obvious solutions to problems. This will undoubtedly create a safer and more welcoming climate in which employees feel they can safely engage in such behaviors, knowing that their risk-taking behaviors will not be penalized if the results are not successful (Edmondson, 1999; AL-Abrow, Thajil, Abdullah & Abbas; 2020). In other words, leaders with a dialectical mindset may be more likely to exhibit creativity management behaviors such as facilitating the flow of ideas, providing space for reasonable risk taking, and helping the employee reach goals independently (Zhang & Bartol, 2010), thus creating a work environment that encourages the launch of creative processes and improved performance. Individuals with high creative self-efficacy. Dialectical thinking reflects a cognitive style that tolerates ambiguities and contradictions (Han & Bai, 2020). Dialectical thinkers tend to deal with these apparent contradictions through the use of compromise and complementarity because they tend to see opposites as being in a state of flux and often moving between extremes. A leader who displays a dialectical thinking style tends to tolerate and encourage different voices and opinions from team members to provide new or even contradictory solutions to problems (Bai, Harms, Han, & Cheng, 2015; Hamza, Alrikabi, Kamil, Thajil, Hasan & Hussein, 2023). When different ideas are welcomed and evaluated in a team discussion, they are more likely to receive thorough consideration and be better integrated into a creative solution (Tett & Burnett, 2003; Mohammad & Thajil, 2023).

Innovative climate

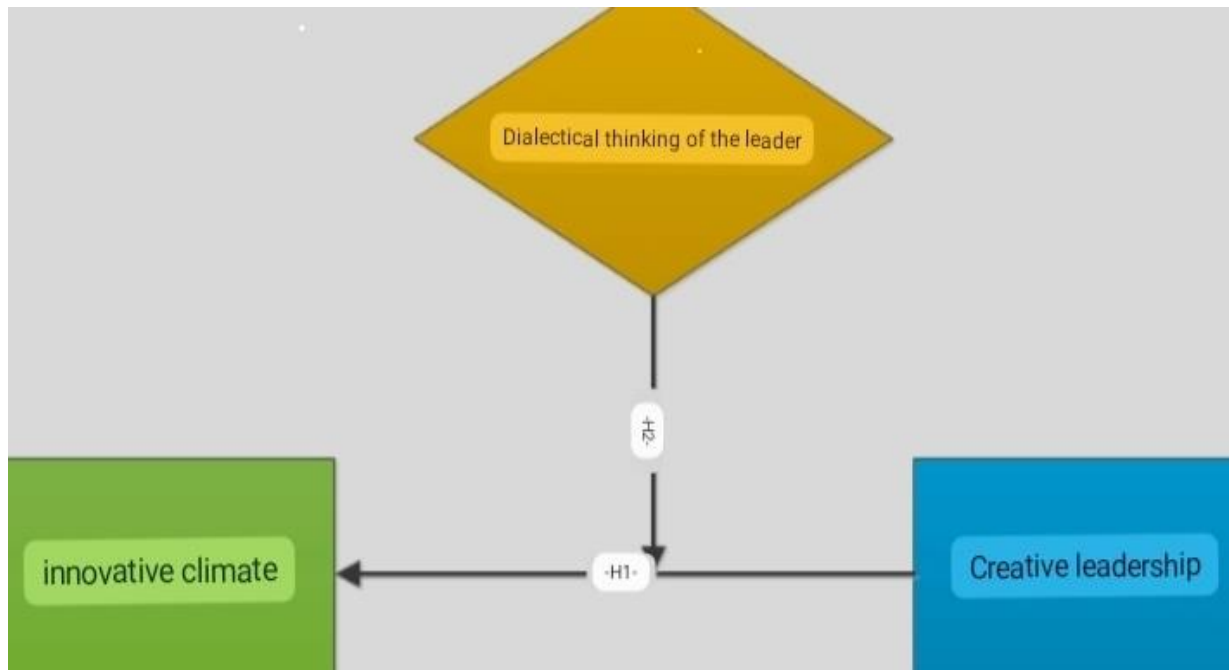
There are different definitions of the innovation climate. However, we have adopted a definition that researchers use consistently and frequently which considers the innovation climate as “shared perceptions at the individual, group, and organizational level regarding the extent to

which individual, group, and organizational processes encourage and enable innovation” (Gandomi & Haider, 2015). Thus, the innovative climate is a combination of autonomy, leadership support, flexibility, encouragement of creative ideas, employee well-being, resourcefulness, trust, collaboration, communication, security, clarity of goals, external focus, performance feedback, and reward. It focuses on individual intellectual activities and processes that create new ideas, visions, and innovative solutions to problems and focuses on adaptation, exploitation, application, and successful implementation of these ideas, solutions, and visions (Akram et al, 2018). While the innovative climate paves the way for the company's innovative performance and competitiveness. Firms seek innovation in terms of new ideas and improved business processes and models to stay competitive in the market (Santhanam & Hartono, 2003). Previous literature has indicated that organizations with climates open to innovation, whose members are willing to take risks and continuously learn to improve the organization, are more successful in implementing actual innovations than organizations with less innovative climates (Kim, Shin, & Kwon, 2012). The innovative climate encourages training, brainstorming, and skill development. It stimulates creativity and leads to thinking outside the box to improve operations, take calculated risks, develop new products and services, and develop business model design (Brynjolfsson & Hitt, 1995; Newman et al., 2020). The process of social learning underlies the development of organizational innovation in innovative climates where the combination of different people, knowledge and resources leads to the generation of new ideas and practices (Zander, 1992) Building hypotheses for the study model.

Some people tend to see everything around them as either good or bad, black or white. Dialectical thinking differs from this trend because it refers to a cognitive style of thinking that accepts opposing sides of ideas in a compromising manner (Chen et al., 2013). Dialectical thinking accepts the contradictions generated by the situation that have both positive and challenging aspects (Nisbett et al., 2013). Where contrasting dualities are seen as integral parts of something larger, dialectical thinkers tend to see that the world is changing rather than stable and static. They tend to believe that two opposing assumptions can coexist harmoniously (Chen, 2002). A study found that creative individuals are more likely to engage in innovative activities when they are in an environment that encourages innovation. We argue that dialectical leaders are more likely to provide an environment that promotes exploratory and exploitative learning activities of employees. Dialectical leaders may stimulate exploratory learning by encouraging employees to experiment with work procedures (Bausch et al., 2011). At the same time, argumentative leaders may also exhibit traditional leadership behaviors such as making corrections, setting goals, and evaluating goal achievement, thereby encouraging activities and motivating employees (Rosing et al., 2011). In fact, research shows that an argumentative leader can help foster an environment in which employees feel confident to take risks (De Vries, Roe, & Taillieu, 2002). For example, CEOs who display behaviors such as praising individual initiatives and providing clear feedback Emphasis on trusted relationships encourages the emergence of team ingenuity (Gibson & Birkinshaw, 2004). On this basis, we can assume the following:

H1: Creative leadership positively affects the innovation climate

H2: A leader's dialectical thinking increases the impact of creative leadership in an innovation climate.



Testing the following hypothesis (2).

Methodology

Sample and procedure

Due to the importance of the oil sector in Iraq, specifically in the province of Basra, this study was conducted in the South Refineries Company. It is important to create an innovative climate that encourages creative behaviors and creative problem-solving by workers. The study population was defined as 7150 employees, according to Thompson (2002), the acceptable sample size was determined at 365, and based on that, 400 questionnaires were distributed randomly, of which 375 were retrieved, of which 368 were valid for analysis.

The questionnaire distribution process was conducted during the first quarter of 2022. The sample included 56% (206) males, 162% (162) females. Respondents were chosen from a variety of occupations, including engineers (15%), technicians (55%) and administrators (30%). The age of the respondents ranged from 24 to 59 years, with an average age of 36 years, while their education levels are divided as follows: preparatory or diploma (51%), bachelor's degree (42%), postgraduate degree (7%). Responses were obtained on a five-point Likert scale ranging from "1" (strongly disagree) to "5" (strongly agree). Study measurement

Creative leadership: This variable was measured based on Liqun et al. (2017), which consists of 6 paragraphs, for example: "Leaders actively promote the implementation of new ideas and proposals."

Innovative climate: This variable was measured based on Scott & Bruce (1994), which consists of two dimensions (tolerance to difference, support for creativity), each dimension consisting of five items, for example: "The reward system here encourages innovation."

Leader dialectical thinking: This variable was measured based on Spencer Rodgers et al. (2015), which consists of 13 paragraphs, for example: "When two parties disagree, the leader's view of the truth is somewhere in the middle."

Data analysis results:

The nature of the data distribution

There is a need to determine the nature of the data distribution for the purpose of selecting the appropriate statistical method for analysis. As the trend will be towards parametric statistics if the data is distributed normally, while the trend will be towards non-parametric statistics when the data is distributed abnormally (Field, 2009). For the purpose of ascertaining the nature of the data distribution, Skewness and Kurtosis will be tested to ascertain the nature of the data. Based on this test, and since the level of significance or degree of confidence required in this study is ($P < 0.05$), the data approaches the normal distribution curve when the Z value for skewness and kurtosis is within (± 1.96). The Z value is extracted by dividing the calculated skew and flattening values by their standard error (Kerr et al., 2002:49). Table (1) shows the results of the data distribution test:

TABLE (1)

Variables	Kurtosis			Skewness		
	Z Kurtosis	Std. Error	Statistic		Std. Error	Statistic
Creative Leadership	-1.791	.254	-.455	Creative Leadership	.127	.116
innovative climate	-1.071	.254	-.272	innovative climate	.127	.088
Dialectical thinking of the leader	-0.540	.254	-.137	Dialectical thinking of the leader	.127	-.006

Through the above table, it is clear that the data distribution was normal because the Z values for Skewness and Kurtosis did not exceed (± 1.96), therefore, parametric statistical tools will be used.

Descriptive statistics and correlation

Table (2) presents the descriptive statistics and the relationship between the variables. The results indicated that the mean of the variables was at an average level for the variables, which ranged between (3.188-3.130). The table also showed that the standard deviation of the variables were slight differences between the opinions of the respondents. The results also indicated that there are positive correlations between the three at the significance level (0.05), and this supports the hypotheses of the current study. Finally, the results indicate that the stability coefficient for all variables (α) has exceeded (0.700), which indicates that the stability of the variables has been achieved, and the possibility of achieving the same results using the same measures.

TABLE(2): Descriptive statistics, correlation, and stability coefficient

Variables	innovative climate	Support creativity	bear the difference	Dialectical thinking of the leader	Creative leadership	standard deviation	Arithmetic mean
Creative leadership					(0.750)	0.675	3.188
Dialectical thinking of the leader				(0.786)	.367**	0.489	3.135
Bearing the difference			(0.748)	.282**	.221**	0.640	3.180
Supporting creativity		(0.735)	.352**	.331**	.270**	0.580	3.130
Innovative climate	(0.779)	.702**	.741**	.371**	.297**	0.502	3.155

** . Correlation is significant at the 0.01 level (2-tailed).

Note: The values in brackets represent the stability coefficient (α)

Hypothesis testing

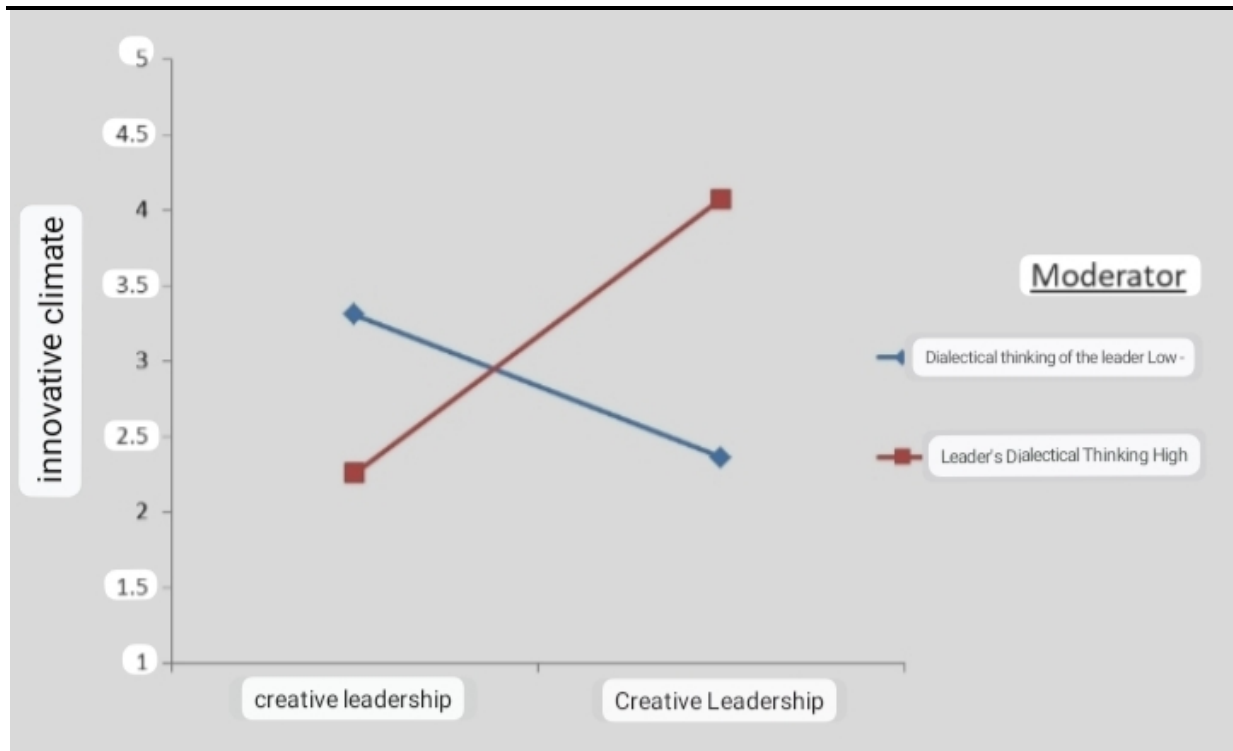
For the purpose of testing the hypotheses of the current study model, hierarchical regression analysis was performed in the SPSS program. The hypothesis is accepted or rejected on the basis of t and p values, where the t value must exceed ± 1.96 , while the p value must be less than 0.05, to accept the hypothesis. Table (3) shows the results of hypothesis testing

Table (3): Hypothesis testing

		Sig.	F	Sig.	T	Std. Error	Beta
H1	(Constant)	.000 ^b	35.461	0.000	19.676	0.085	
	Innovative leadership			0.000	5.955	0.037	0.297
H2	(Constant)	.000 ^c	28.355	0.000	6.359	0.348	
	Creative leadership			0.026	2.236	0.172	0.217
	Dialectical thinking of the leader			0.297	1.044	0.163	0.166
	Creative leadership dialectical thinking of the leader			0.002	3.116	0.077	0.689

a. Dependent Variable: innovative climate

Through the table above, we can see that the two hypotheses of the study are accepted. This indicates the existence of an influence relationship of creative leadership in the innovative climate, in addition to the existence of an important and clear role for the leader's dialectical thinking in increasing the influence of creative leadership in the innovative climate. Figure 2 illustrates the second hypothesis test graphically



Testing the second hypothesis (3)

Discussion

The purpose of this study was to identify the relationship of the impact of creative leadership on the innovative climate, in addition to identifying the interactive role of the leaders' dialectical thinking in that influence. The current study is in line with many attempts made by previous studies in different models and contexts, for example (Lang, Lisak, Zhang, & Zhong, 2019; Han & Bai, 2020; Han, Bai, & Peng, 2022). The results of this study confirm the important influence of creative leaders on the innovative climate, in addition to the significant effect of the dialectical thinking of the leaders, as the creative leaders with a dialectical thinking style will be an environment and a working climate that encourages and supports innovation significantly. In the coming sections we will discuss the implications for theory and practice, as well as suggest a number of future directions for research.

Theoretical implications

Play a pivotal role in the nature of the work climate and environment, as the provision of material and moral work resources will be dependent on the nature and style of leadership prevailing (Lang et al., 2019). Flexibility, work dynamism, and the nature of interaction between the leader and subordinate will be at high levels when the leadership style is supportive of creativity (Khan et al., 2020). The results of the current study confirm this aspect, as the creative leaders will create a work environment that supports the attitudes and attitudes of workers towards creative solutions and ideas. The current study confirms that the interaction between leaders and employees will be the most important determinant in the nature of the work environment. Leaders provide the necessary material and moral support for creativity, and therefore, they

accept and encourage solutions that provide non-traditional solutions and at the same time are clear and contextual content that matches reality. In this context, ambiguous solutions or ideas with a contradictory context will be highly unsupported by creative leaders. On this basis, leaders with dialectical thinking who accept and discuss unclear and contradictory ideas will greatly increase the level of organizational climate supportive of innovation (Han & Bai, 2020). The results of our study support this conclusion, as the results that have been reached confirm greatly the importance of leaders having dialectical thinking with a creative orientation in creating a climate that supports innovation in the workplace. This confirms that leaders with a creative orientation and dialectical thinking exceed their influence on the employee's activities and skills to the general atmosphere of the work. Therefore, all employees will feel that their ideas and suggestions will be welcomed, even if they are strange or vague. These results support the multi-level role of leaders in the workplace, as their influence on behavior at the individual level in the first place, in addition to the behavior at the collective level in the second degree. Ultimately, this role will later contribute to behavior at the organizational level.

Practical implications

By discussing the findings, we can suggest a number of guiding points that are important for practitioners in the workplace. First: The responsibility for creating a supportive climate for innovation must rest with the leaders, and therefore this goal must be framed and adopted in an institutional way. Secondly, the organization can have leaders with a creative orientation who contribute to the creation of new ideas at work, but creating leaders with dialectical thinking needs training and development efforts for the leading cadres, specifically the middle leaders. On this basis, organizations can adopt advanced levels of development programs to develop their leaders in this aspect. Third, some leaders may believe that moral support will be sufficient to encourage innovation. In fact, this may be true in the short term, but in the long term there will be a need to develop and modify the reward structure to be designed in a way that supports such innovative behaviors. Financial support will make the innovation climate sustainable, which affects the efficiency and strategic effectiveness of organizations. Finally, there is another matter that must be paid attention to regarding how to deal with new ideas that do not fit the status quo after they have been discussed. Dealing with new ideas that are not suitable for the current situation will be a double-edged sword, as the employee who owns the idea will feel frustrated and the organization will lose a creative human element in the future. Therefore, leaders must know how to deal with such a situation with great interactive and emotional efficiency.

Limitation & future directions of research

Despite the obtained results, there are a number of limitations that should be discussed and recommended to be addressed in future studies. The current study is a cross-sectional design that relies on collecting data at one point, and therefore this matter will lose the results of their causal nature, in addition to the risk of potential bias in the response. Therefore, we recommend that future research focus on the possibility of conducting longitudinal studies that extract causal relationships between variables more accurately. In addition, the study model is limited to only three variables. We suggest that future studies test other variables, for example: self-efficacy or

testing other leadership styles along with the leaders' dialectical thinking. Finally, the results of the current study were drawn from the oil sector, specifically the South Refineries Company, so care must be taken about generalizing the results. Therefore, we suggest that such studies be applied in other sectors, such as the banking sector, the educational sector, or the health sector.

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