THE EFFECTIVENESS OF A SHORT TERM SIMULATION FOR
TEACHING FOREIGN POLICY AND NATIONAL SECURITY AFFAIRS*

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ABSTRACT

The teaching effectiveness of a short-term minimal structure simulation was assessed using Lickert type questionnaires before and after the experience. Attitudinal change of 416 students on twenty-one foreign policy and international security propositions was measured. Four hypotheses were studied: (1) Students participating in a simulation will reveal more interest in such activities than in more conventional classroom activities; (2) Students participating in a simulation will reveal increased empathy for the problems decision makers confront; (3) Gaming augments a students' understanding of decision-making and international politics; (4) Gaming is more effective when used in conjunction with pre-game reading and discussion.

The first three hypothesis were confirmed. A Paired Samples T-Test revealed significant change in attitude. A substantive conclusion is that simulations may shorten the learning time of students of international politics.

The purpose of this project was to assess the impact of a minimal-structure short-term simulation as a teaching aid for courses dealing with international security, military strategy and foreign policy. The simulation assessed was constructed by the author and Major Robert Van Steenburg, U.S.A.

The simulation, "Foreign Policy Decision Making: An Exercise," was "minimal structure" (Heap, 1971) insofar as it did not have a multitude of directions, rules and rounds of play; there was little or no intervention by administrators once the game was in play. Nor did it request the players to perform specific "theatrical roles" (Lincoln, the Archduke of Austria, or a fictional character, Adam Wolsey). Participants were asked to act in accordance with what they thought was reasonable, given their perception of other players. This particular short-term simulation requested participants to assume they were decision-makers of countries of various size in an international system depicted as a three tiered, multi-dimensional system within

a bi-polar setting. The rules were designed merely to help generate an analogous system and to define the outcomes of wars.

The impact of role playing was measured through: (1) observation of attitudinal change after the simulation; (2) comparison with a control group; (3) comparison with a panel of professors. The attitudes of 416 students were assessed using a Lickert scale for twenty-one propositions about foreign policy. Another group of 64 students were given a pre-game reading package. Finally, these groups were compared with a consensus of nine professors on the validity of the selected foreign policy propositions.

An effort was made to avoid some of the shortcomings of research on simulations (Fletcher, 1971). Application of the simulation and administration of the questionnaires were standardized. The study was not a single role playing analysis. The game was tested 18 times.

The following principle hypothesis were considered: (1) Students participating in a simulation will reveal more interest in such activities than in more conventional classroom activities; (2) Students participating in a simulation will reveal increased empathy for the problems decision-makers confront in foreign policy making; (3) Gaming augments a student's understanding of decision-making and international politics; (4) Gaming is more effective when used in conjunction with pre-game reading and discussion.

Hypothesis 1 was confirmed. Students were more interested in role playing after the simulation. Cherryholmes' (1966) analysis of six educational studies revealed that increased interest was the only significant impact that could be established for simulations.

At $Time_1$ (before) and $Time_2$ (after) students were requested to indicate their preference for these non-traditional classroom activities: (1) role playing in a game; (2) game playing with other students; (3) determining alternative courses of action; (4) influencing the outcome of a situation;

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(5) having other students judge your actions. Student preference for each activity was significantly increased after playing the simulation. Significance was determined through the use of the Paired Samples T-Test. The increase in positive attitude toward role playing and games is revealed by Table 1.

TABLE 1 Percent Change in Student Attitude Toward Nontraditional Classroom Activities After Simulation						
Activity	Percent				Percent Change S. Like	From T_1 to T_2* Like
	S. Like		Like			
	T_1	T_2	T_1	T_2		
1	17.8	27.6	33.4	49.8	9.8	16.4
2	13.0	28.6	43.8	51.9	10.8	8.1
3	19.7	21.2	56.0	62.0	1.5	6.0
4	33.4	31.3	50.0	57.2	-2.1	7.2
5	6.0	6.3	21.4	29.6	.3	8.2

*Activities had significant change at .05 level using Paired Samples T-Test. All Change was significant.

Before the simulation, 51.2 percent strongly liked or liked role playing. After the game this percentage increased to 77.4. These attitudes did not vary with such factors as age, number of quarters completed, or instructor.

An important question remains concerning the impact of participation on student attitudes toward traditional classroom activities. Frequently, a major argument for simulations is the general renewal of student interest and vitality in a classroom. Participation in the simulation did not increase favorable attitude toward conventional classroom activities. Students were asked at T_1 and T_2 to state their degree of preference for: (1) listening to lectures; (2) asking a lecturer questions; (3) taking notes; (4) asking questions during a lecture; (5) having a lecturer evaluate your responses. A Paired Samples T-Test revealed no significant change in attitudes toward these classroom activities. There appears to be no significant "spill over" from increased excitement about games to increase excitement about traditional classroom activities.

The second hypothesis was also confirmed. Students participating in the simulation revealed greater empathy for the problems of decision-makers.

Role playing certainly is related to empathy or empathy skills. Scholars, however, have not agreed (Henderson, 1962) on whether empathy is a condition (Strunk, 1957) that appears between two persons or an individual skill (Smith, 1966). In this study empathy was considered a condition or consequence of entering another person's experience. An increase of empathy occurred when there was a move-

ment from a position different from a person to a position similar.

To obtain the position of decision-makers the author resorted to a group of Political Science and Diplomacy professors. They were asked to complete a questionnaire in accordance with their judgment of what Dr. Henry Kissinger's responses would be to the propositions. This technique was necessitated by the inaccessibility of foreign policy decision-makers. While the dangers of this implement are obvious, it is frequently used by researchers on empathy (Hutch, 1962).

The professors had a high consensus on the propositions. There was a "strong consensus on eleven of the propositions, a "consensus" on seven, and "no consensus" on three. A "strong consensus" was calculated when one or no Judge had a response different from the others; a "consensus" was calculated as two divergent responses; "no consensus" constituted more than two divergent responses. Table 2 illustrates the propositions both the professors and the students were asked to assess.

Throughout the game, students were requested to assume the role of foreign policy decision-makers. Table 3 indicates that the game process of "entering another person's experience" (Johnson, 1957) significantly altered student attitudes. Student attitudes moved significantly in the direction of what the Judges thought were the views of actual decision-makers. A Paired Samples T-Test revealed that attitudes significantly changed on 18 of 21 propositions.

A brief review indicates that on seven of the propositions there was more than a 15 percent increase in students who developed positions similar to the Judges after role playing. There was more than a ten percent increase in student similarity with the Judges on nine propositions. On 17 propositions there was more than a five percent increase in the direction of the Judges.

A further measure of the impact was effected by examining students whose attitude changed from a position opposite the Judges before the simulation to a position identical to the Judges after the simulation. Table 4 suggests that rather striking numbers of students changed their opinions to conform with the Judges after the simulation. Indeed, with the exception of one proposition, the range of students who changed attitudes was from 21 percent to 66 percent, while the average change was about 37 percent.

It is apparent the game also had a discriminate impact. Students with limited social science experience were most influenced by the exercise. This was revealed by collapsing the categories and controlling for such factors as selected major, Political Science courses completed, number of quarters completed, number of Foreign Policy and International Politics courses completed. The categories were collapsed to three (agree, no opinion, disagree) to subject the simulation to a maximum test. At this

TABLE 2

Twenty-One Propositions Students Were Asked to Assess

Identification Number	Proposition
1	It is easy to take appropriate foreign policy action when the facts are known.
2	Decision-makers are able to make a decision before the problem reaches crisis proportions.
3	Nations cannot adequately plan for changing situations.
4	Miscalculation of intent is a major problem in making a decision.
5	There is always a solution to a crisis which will generally satisfy the concerned parties.
6	It is not that difficult to make adequate plans for fluid situations.
7	Decisions are usually based on incomplete or misleading information.
8	The smaller the crisis the easier the task of making a decision.
9	The process by which foreign policy decisions are made is quite rational.
10	A decision-maker acts upon what he construes as the situation, rather than acting on an objective analysis of the situation.
11	Any crisis may be prolonged so that decision makers may gather pertinent information.
12	Generally, foreign policy decision-makers consider the nation's short range objectives rather than her long range objectives.
13	All the facts relating to a crisis can be determined during that crisis.
14	A system of two opposing superpowers is more stable than a system of numerous equal powers.
15	Agreements between opposing superpowers do not make smaller nations nervous.
16	Threat can maintain peace, when problems cannot be resolved.
17	Countries should intervene in the affairs of other countries when it is necessary for the maintenance of world peace.
18	Supporting previous commitments strengthens an alliance.
19	Strong alliances are necessary for survival.
20	It is pragmatically naive to speak of diplomacy in terms of ethics.
21	A country should disregard its commitments when they are no longer expedient.

TABLE 3
Attitude Change Toward Judges Estimate of Officials' Opinions
(Percent change, T-Test Significance)

Proposition	Student's (Percent)		Percent Change	T-Test Significance Levels	Judges Position
	T_1	T_2			
1	63.3	68.5	5.2	NS	Disagree
2	45.2	64.2	19.0	L.001	Agree
3					No Consensus
4	78.4	86.0	7.6	L.05	Agree
5	62.7	67.3	4.6	L.05	Disagree
6	64.2	75.7	11.5	L.001	Disagree
7					No Consensus
8	54.1	59.6	5.5	L.05	Disagree
9	52.4	68.1	15.7	L.001	Disagree
10					No Consensus
11	50.7	59.6	8.9	L.05	Disagree
12	47.4	59.9	12.5	L.001	Agree
13	85.4	86.3	0.9	NS	Disagree
14	46.9	49.4	2.5	NS	Agree
15	82.2	87.2	5.0	L.01	Disagree
16	47.9	57.2	9.3	L.01	Agree
17	49.0	55.1	6.1	L.001	Agree
18	78.8	83.6	4.8	L.05	Agree
19	48.5	63.7	15.2	L.001	Agree
20	37.5	53.2	15.7	L.001	Agree
21	22.4	31.7	9.3	L.001	Agree

TABLE 4
Attitude Conversion from Position Opposite Judges Before
Simulation to Position Identical to Judges after Simulation

Proposition Number	Students with Attitude Opposite Judges before Simulation Whose Attitude Becomes Identical to Judges After Simulation		
	Percentage	Frequency	Total Frequency
2	44.2	(72)	(163)
4	3.6	(8)	(220)
5	36.9	(41)	(111)
6	65.5	(38)	(58)
7	40.5	(45)	(111)
8	33.6	(48)	(143)
9	44.4	(28)	(16)
11	34.4	(43)	(125)
12	45.4	(59)	(130)
15	39.3	(11)	(28)
16	41.7	(43)	(103)
17	28.2	(24)	(85)
18	48.5	(16)	(33)
19	32.7	(32)	(98)
20	33.0	(30)	(91)
21	21.4	(36)	(168)

point the concern was not whether or not the simulation intensified attitudes (changed attitudes from disagree to strongly disagree) but whether it really changed attitudes.

The Gamma test was used to measure the stability of attitude of students. A high Gamma score will reveal a limited impact of the simulation for it will indicate that attitudes at T_1 and T_2 are highly associated. Conversely, a low Gamma score will reveal an attitudinal change from T_1 to T_2. At the bottom of Tables 5 through 8 is a depiction of the mean ranking of the Gamma scores for the entire twenty-one propositions. The mean ranking instrument was used only to give the reader a rough idea of the discriminate impact of the simulation. Each mean score was calculated by rank ordering the Gamma scores of each proposition by the major groupings; the total rankings for each group were summed and divided by the total number of propositions. The mean ranking instrument is only a summary indicator for interpreting the Gamma scores for all twenty-one propositions.

The attitudes of History, Sociology and Political Science majors, as revealed in Table 5, were less affected by the simulation than were the attitudes of Business, Education and Engineering majors. Similarly, Table 6 illustrates that the attitudes of students who completed more than three Political Science courses were less frequently altered by this role playing experience than the attitudes of students who completed less than one. Moreover, Table 7 reveals that students who completed one or more International Politics or Foreign Policy courses had their attitudes reversed less than those who had not completed such courses. Again, Table 8 shows the simulation had a greater impact on students with limited course work generally than those with more class work.

The third hypothesis was confirmed. Gaming appears to augment student understanding of decision-making and international politics.

Understanding may be defined as perceiving the meaning or implication, or grasping the nature or character of a phenomenon. Certainly it is related to empathy; Allison (1971) concluded that scholars frequently attempt to understand and explain events through "vicarious problem solving." Professors, however, may not be satisfied with developing attitudes among students that are similar to those of officials.

As a concept, understanding may be operationally defined in several ways. By administering a "fact mastery" test Robinson et al (1966) assessed the Inter-Nation Simulation for its capability to generate "understanding of principles." Others have suggested that "fact mastery," namely, a knowledge of historical events, persons or things is not necessarily understanding. Joseph (1965) was particularly emphatic about this point:

"If we are to convince our students that economic analysis will help them understand their environment, we shall have to aim for more than an intellectual understanding of the subject matter. Intellectual learning is not enough; economics must be accepted by students before they will use it outside the classroom. When I first started to teach, I was told the story of a student whose reaction to an exposition of the fractional reserve system was to advance on the instructor with the intent to do bodily injury. He evidently felt his world was being attacked by the non-believers. The example may be extreme, but it illustrates the emotional barriers to communication that block the understanding and acceptance of economics. If our teaching is to have effect, we must change strongly held beliefs that may not be susceptible to reason alone."

Frequently, in any field the task of a professor is as much one of changing strongly held views as it is one of generating "fact mastery."

The simulation was tested for its ability to generate understanding by changing beliefs rather than increasing "fact mastery." However, political facts frequently are such when relevant persons agree that certain beliefs are facts (Levine, 1963). The nine professors were asked to state their professional judgment as to whether or not the twenty-one propositions represented a realistic depiction of decision-making and international politics. Thus a test of student attitude change toward a consensus of "experts" may not be markedly different from a "fact mastery" analysis.

Participation in the simulation did change beliefs. On all but three of the propositions, student attitudes changed significantly after participation in the game. After the game, growing numbers developed attitudes similar to the consensus of the professors. On five of the propositions, there was more than a 15 percent increase in students with attitudes similar to the professors. On 15 of the propositions, there was more than a five percent increase in students with positions similar to the professors. Table 9 illustrates the change.

TABLE 5
Gamma Scores of Selected Majors

Proposition Number	History	Sociology	Political Science	Business	Education	None	Engineering
1	NS						
2	.365	.777	.567	.293	.405	.772	.421
3	1.000	.461	.381	.745	.803	.505	-.200
4	1.000	.555	.365	.458	.777	.127	.565
5	.844	.500	.661	.489	.100	.207	.493
6	.731	.511	.530	.498	.104	.210	.495
7	.333	.100	.433	.315	.233	.140	.200
8	.443	.230	.801	.263	.608	.779	.400
9	.482	.673	.525	.755	.473	.680	.147
10	.518	.579	.524	.454	.252	.612	.232
11	.769	.571	.441	.287	.462	.249	.515
12	.855	.746	.651	.552	.248	.136	.489
13	NS						
14	NS						
15	1.000	.882	.578	.209	.161	.515	1.000
16	.532	.937	.478	.625	.651	.189	-.062
17	.768	.176	.685	.489	-.142	.052	.287
18	.789	1.000	.506	-.078	.692	.369	.103
19	.642	.746	.528	.363	-.105	.136	.242
20	.431	.842	.603	.298	.135	.123	.723
21	.365	.466	.447	.325	.684	.496	.240
Mean Ranking of Gamma Scores on 21 Propositions	5.380	4.830	4.500	3.610	3.500	3.330	3.000

TABLE 6
Gamma Scores of Political Science Majors

Proposition	Number of Political Science Courses				
	0	1	2-3	4-6	7-9
1	NS				
2	.478	.567	.559	.282	.749
3	.465	.556	.524	.165	.493
4	.327	.153	.717	.641	1.000
5	.666	.306	.762	.737	.407
6	.212	.514	.690	.500	.295
7	.288	.500	.623	.493	.286
8	.350	.764	.508	.844	.786
9	.343	.652	.548	.589	.510
10	.502	.467	.615	.473	.664
11	.423	.641	.582	.466	.107
12	.386	.550	.527	.856	.789
13	NS				
14	NS				
15	.450	.572	.513	.681	1.000
16	.392	.587	.422	.223	.617
17	.600	.308	.455	.710	.849
18	.284	.292	.523	.639	-2.000
19	.241	.601	.707	.392	.511
20	.462	.245	.481	.545	.741
21	.502	.535	-.012	.578	.546
Mean Ranking of Gamma Scores on 21 Propositions	1.720	2.830	3.220	3.110	3.380

TABLE 7
Gamma Scores Depicted for Number of Foreign Policy
and International Politics Courses.Completed

Proposition Number	Foreign Policy-IR Courses		
	0	1-2	3-7
1	NS		
2	.548	.470	.612
3	.491	.465	.187
4	.249	.739	1.000
5	.500	.733	.363
6	.189	.247	.391
7	.422	.569	.238
8	.596	.700	1.000
9	.561	.544	.120
10	.464	.608	1.000
11	.594	.316	.136
12	.528	.613	1.000
13	NS		
14	NS		
15	.432	.533.	.714.
16	.195	.366	.611
17	.425	.635	.882
18	.317	.426	.611
19	.522	.444	.186
20	.368	.551	.621
21	.438	.388	.571
Mean Ranking of Gamma Scores on 21 Propositions	1.550	2.000	2.440

TABLE 8
Gamma Scores Depicted for Quarters Completed

Proposition Number	Quarters Completed				
	0-1	2-3	4-6	7-9	10+
1	NS				
2	.219	.816	.517	.540	.455
3	.658	.319	.415	.544	.455
4	.245	-.028	.501	.650	.702
5	.163	.594	.651	.751	.534
6	.210	.430	.478	.484	.861
7	.331	.692	.646	.311	.300
8	.634	.754	.667	.637	.618
9	.709	.355	.478	.507	.672
10	.275	.880	.427	.984	.648
11	.556	.501	.536	.483	.342
12	.373	.636	.515	.773	.625
13	NS				
14	NS				
15	.770	.613	.418	-.081	.401
16	.640	.448	.433	.324	.538
17	.431	.530	.559	.415	.683
18	.472	.477	.159	.478	.501
19	.343	.766	.501	.265	.660
20	.310	.403	.346	.616	.545
21	.442	.129	.374	.697	.551
Mean Ranking of Gamma Scores on 21 Propositions	2.610	3.270	2.720	2.940	3.440

TABLE 9
Attitude Change Toward Professional Opinion of Judges
(Percent Change, T-Test Significance)

Proposition	Students (Percent) T_1	T_2	Percent Change	T-Test Significance Levels	Judges Position
1	63.3	68.5	5.2	NS	Disagree
2	45.2	64.2	19.0	L.001	Disagree
3					No Consensus
4	78.4	86.0	7.6	L.05	Agree
5	62.7	67.3	4.6	L.05	Disagree
6	64.2	75.7	11.5	L.001	Disagree
7	48.6	63.7	15.1	L.001	Agree
8	54.1	59.6	5.5	L.05	Disagree
9	52.4	68.1	15.7	L.001	Disagree
10	58.1	76.7	18.6	L.001	Agree
11	50.7	59.6	8.9	L.05	Disagree
12	47.4	59.9	12.5	L.001	Agree
13	85.4	86.3	.4	NS	Disagree
14	46.9	49.4	2.5	NS	Agree
15	82.2	87.2	5.0	L.01	Disagree
16	47.9	57.2	9.3	L.01	Agree
17	49.0	55.1	6.1	L.001	Agree
18					No Consensus
19	48.5	63.7	15.2	L.001	Agree
20					No Consensus
21	22.4	31.7	9.3	L.001	Agree

As a result of role playing, less experienced students developed attitudes not only similar to the professors but also similar to the more experienced students. As Table 10 illustrates, students who had taken two or more foreign policy and international politics courses were compared with those who had not taken such courses. At T_1 there were considerable differences between the two groups in terms of their agreement with the professors. Larger percentages of experienced students had attitudes that paralleled the professors. But at T_2 the inexperienced students agreed with the professors more than did the experienced pre-participants. On eleven of the 15 valid propositions, the inexperienced group at T_2 actually had more students with attitudes similar to the professors than the pre-participant experienced group.

Among experienced students it is apparent the role playing exercise tended mostly to reinforce or intensify convictions. An intensification of attitude occurred when a participant changed his or her position from "agree" to "strongly agree" or "disagree" to "strongly disagree." The experienced students more frequently had attitudes similar to the professors before the simulation. An examination of students who had completed four to nine political science courses reveals that the attitudes of sizable numbers of experienced students were intensified by participation in the simulation.

Table 11 reveals that students who completed between four and six political science courses had an average intensity change of 15.5 percent (they changed from merely agreeing with the professors to strongly agreeing with them). A change of 11.0 percent developed among students who had completed more than seven political science courses.

The fourth hypothesis that games are more effective when used in conjunction with pre-game discussion and investigation was not confirmed.

In all but two of the classes, the simulation was performed without any pre-game discussion by faculty or any investigation by students. However, 64 students (15 percent) in two classes were given a special Reading Package and were asked to write policy papers before the questionnaire was administered to them. The Reading Package consisted of articles on various bargaining strategies and alternative ways to prevent war. Each student was required to write a paper outlining a strategy for survival, as well as a policy for preventing war.

A central concern was whether or not pre-game investigation and reading resulted in greater agreement with the Judges by this group at T_1 and T_2, than by those who had no pre-game investigation or reading.

TABLE 10
Comparison of Similarity of Inexperienced FPIR Students
With Experienced FPIR Students Before and After the Simulation

Proposition Number	Percent Differences of Students With No FPIR and Those Who Had Two at T_1	Percent Differences of Students With No FPIR at T_2 and Those With Two FPIR at T_1
1	NS	NS
2	8.7	+13.9
3	NC	
4	19.6	8.7
5	3.4	+1.4
6	9.9	
7	10.7	+8.2
8	7.4	3.3
9	14.3	+5.5
10	12.5	+8.2
11	5.9	+4.8
12	9.8	+5.6
13	NS	
14	NS	
15	5.2	+1.9
16	7.2	+2.4
17	2.7	+6.4
18	NC	
19	11.9	+28.4
20	NC	
21	1.5	6.7

+The plus sign indicates that the students who completed no FPIR were closer to Judges than those who had large numbers of FPIR courses.

TABLE 11
Percentage of Experienced Political Science Students Who Intensified
Their Agreement with the Judges After Participating in the Simulations

Proposition Number	Number of Political Science Courses 4-6	7-9
1	NS	
2	16.0	30.4
3	NC*	
4	16.7	44.8
5	18.2	14.3
6	17.5	14.3
7	32.1	14.3
8	8.8	0
9	15.2	12.0
10	20.7	10.7
11	7.7	4.8
12	20.0	4.3
13	NS	
14	NS	
15	25.0	24.1
16	11.8	10.5
17	6.3	9.5
18	NC	
19	17.6	11.8
20	NC	
21	0	0

*NC - No Consensus Among Judges

Preliminary observation of the data indicated that the Reading Package Group agreed with the Judges at T_1 more than the others. Moreover, at T_2 the Reading Package Group had higher proportions of students who had positions similar to the Judges than the others. At T_1, the Reading Package Group had from 5 to 10 percent more students who agreed with the Judges on twelve of the fifteen valid items than the other students. After the simulation, the Reading Package Group had higher percentages of similarity with the Judges than the others.

However, these findings can be misleading for when other experiences such as number of political science courses completed or number of foreign policy courses completed were considered, no clear impact of the reading package technique could be discerned. Although there were sixty-four students who were given the reading package, only a few had not taken at least four political science courses and at least two foreign policy-international politics courses. Moreover, the responses of the Reading Package group to the twenty-one propositions were remarkably similar to the responses of the experienced Political Science majors at both T_1 and T_2. These two developments made it impossible to assess the impact of the technique independent of other kinds of experience.

CONCLUSION

This study was an assessment of role playing, not a single experiment, but eighteen experiments. Yet, it should be indicated the analysis was still an examination of one simulation. A further reservation is that it was an analysis of attitudinal change of a limited number of propositions.

However, the study did establish that role playing did generate greater interest in "non-traditional" teaching techniques. Role playing appeared to generate a significant increase in attitudes similar to those of experts. Yet, role playing had greater impact on less experienced students than on more experienced students. Before the simulation, considerable proportions of inexperienced students had attitudes opposite the panel of professors and the more experienced students. But, after only five periods of simulation significant numbers changed their beliefs. Although only twenty-one propositions were examined, perhaps a case can be made that role playing shortens the time period for students to develop a realistic understanding of decision-making for foreign policy and national security affairs.

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